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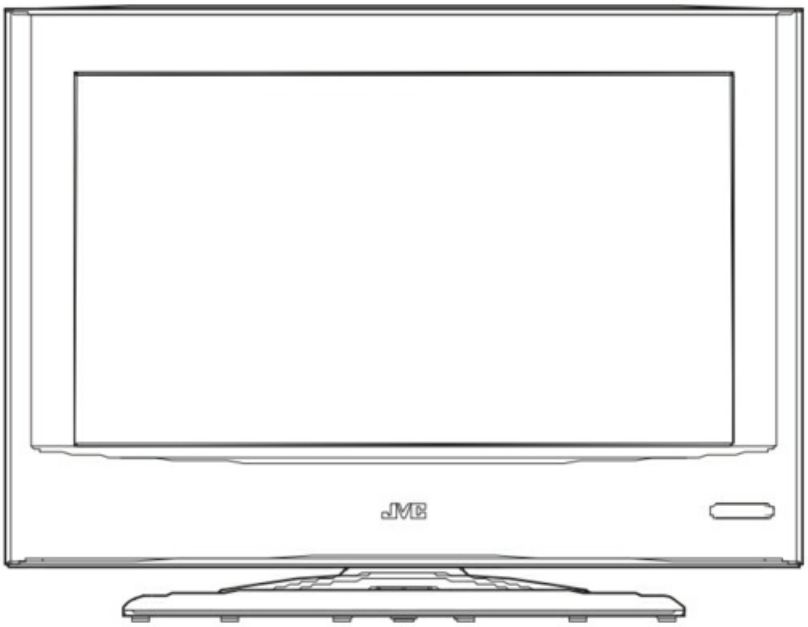
JVC INTERIART LT-20A55SJ SERVICE MANUAL



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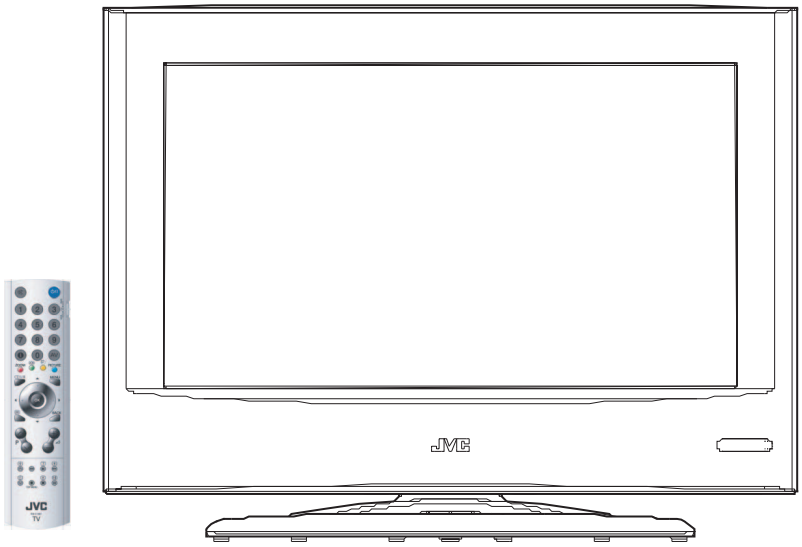
JVC

SERVICE MANUAL

WIDE LCD PANEL TELEVISION

LT-20A55SJ,
LT-20A55SU

InteriArt



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No.YA381
2006/3

SPECIFICATION

Items		Contents
Dimensions (W × H × D)		53.7cm × 41.4cm × 21.4cm [Included stand] 53.7cm × 37.7cm × 9.7cm [TV only]
Mass		6.5kg [Included stand] 5.5kg [TV only]
Power Input	ADAPTOR TV	AC100 - 240V 50Hz DC24V
Power Consumption		80W (Standby: 3.0W)
TV RF System		CCIR (B/G, DK, I, L)
Colour System		PAL / SECAM / NTSC 3.58/4.43 [EXT only]
Stereo System		A2 (B/G) / NICAM (B/G, I, L)
Receiving Frequency	VHF UHF CATV	47 MHz - 470 MHz 470 MHz - 862 MHz S1 - S20 / S21 - S41
Intermediate Frequency	VIF SIF	38.9 MHz (B/G, I, L) 33.4 MHz (5.5MHz : B/G) 32.9 MHz (6.0MHz : I) 32.4 MHz (6.5MHz : L)
Colour Sub Carrier Frequency	PAL SECAM NTSC	4.43 MHz 4.40625 MHz / 4.25MHz 3.58 MHz / 4.43 MHz
Teletext System		FLOF (Fastext level 2.5), WST(World Standard system) TOP (German system)
LCD panel		20V-inch wide aspect (16 : 9)
Screen Size		Diagonal : 50.9cm (H: 44.4cm × V: 24.9cm)
Display Pixels		Horizontal : 1366 dots × Vertical : 768 dots (W-XGA)
Audio Power Output		3W + 3W(10% THD)
Speaker		3cm × 10cm × 2
Aerial terminal (VHF/UHF)		F-type connector, 75Ω unbalanced, coaxial
EXT-1 (Input / Output)		21-pin Euro connector (SCART socket) × 1
EXT-2 (Input)	S-Video Video Audio	Mini-DIN 4 pin × 1 Y: 1V (p-p), Positive (Negative sync provided), 75 Ω C: 0.286V (p-p) (Burst signal), 75 Ω 1V (p-p), Positive (Negative sync provided), 75 Ω, RCA pin jack × 1 500mV (rms), High impedance, RCA pin jack × 2
PC (RGB) Input		D-sub 15pin × 1 R/G/B : 0.7V (p-p), 75Ω HD / VD : 1V (p-p) to 5V (p-p), high impedance < Available signal > Horizontal : 30kHz - 57kHz Vertical : 50Hz - 70Hz [Resolution : 640 pixels × 480 pixels(VGA), 800 pixels × 600 pixels(SVGA), 1024 pixels × 768 pixels (XGA), support up to 1360pixels × 768ptxejs]
PC AUDIO input		3.5mm stereo mini jack × 1
Headphone		3.5mm stereo mini jack × 1
Remote Control Unit		RM-C1861 (AA/R6 dry cell battery × 2)

Design & specifications are subject to change without notice.

SECTION 1
PRECAUTION

1.1 SAFETY PRECAUTIONS [EXCEPT FOR UK]

(1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.

(2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

(3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual**. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.

(4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED (NEUTRAL) : (⏚) side GND and EARTH : (⏚) side GND.
Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.). If above note will not be kept, a fuse or any parts will be broken.

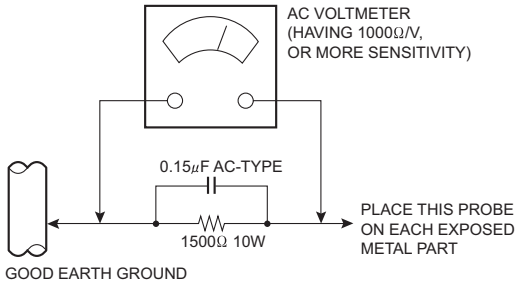
(5) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

(6) **Isolation Check (Safety for Electrical Shock Hazard)**
After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

a) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. (. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

b) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

Alternate Check Method
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000Ω per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).
However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



1.2 SAFETY PRECAUTIONS [FOR UK]

(1) The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.

(2) Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

(3) Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessary be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may cause shock, fire, or other hazards.

(4) The leads in the products are routed and dressed with ties, clamps, tubing's, barriers and the like to be separated from live parts, high temperature parts, moving parts and / or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

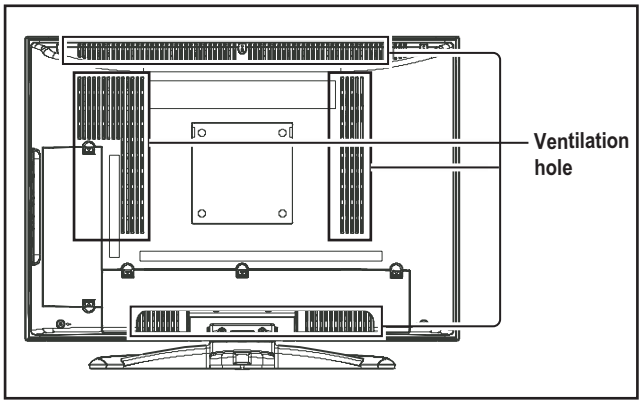
WARNING

(1) The equipment has been designed and manufactured to meet international safety standards.
(2) It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
(3) Repairs must be made in accordance with the relevant safety standards.
(4) It is essential that safety critical components are replaced by approved parts.
(5) If mains voltage selector is provided, check setting for local voltage.

1.3 INSTALLATION

1.3.1 HEAT DISSIPATION

If the heat dissipation vent behind this unit is blocked, cooling efficiency may deteriorate and temperature inside the unit will rise. The temperature sensor that protects the unit will be activated when internal temperature exceeds the pre-determined level and power will be turned off automatically.Therefore, please make sure pay attention not to block the heat dissipation vent as well as the ventilation outlet behind the unit and ensure that there is room for ventilation around it.



1.3.2 INSTALLATION REQUIREMENTS

Ensure that the minimal distance is maintained, as specified below, between the unit with and the surrounding walls, as well as the floor etc.Install the unit on stable flooring or stands.Take precautionary measures to prevent the unit from tipping in order to protect against accidents and earthquakes.

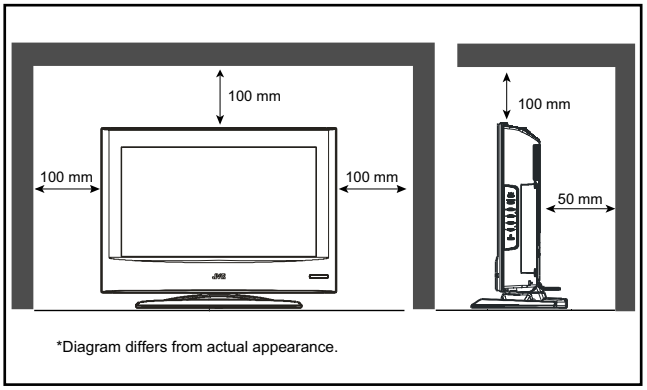


*Diagram differs from actual appearance.

1.3.3 NOTES ON HANDLING

(1) WHEN TAKING UNIT OUT OF A PACKING CASE
When taking the unit out of a packing case, do not grasp the upper part of the unit. If you take the unit out while grasping the upper part, the LCD PANEL may be damaged because of a pressure. Instead of grasping the upper part, put your hands on the lower backside or sides of the unit.

(2) AS FOR PRESSING OR TOUCHING A SPEAKER
Be careful not to press the opening of the speaker in the lower part of the unit and around them since the decorative sheet on the surface of the openings may be deformed.

1.4 HANDLING LCD PANEL

1.4.1 PRECAUTIONS FOR TRANSPORTATION

When transporting the unit, pressure exerted on the internal LCD panel due to improper handling (such as tossing and dropping) may cause damages even when the unit is carefully packed. To prevent accidents from occurring during transportation, pay careful attention before delivery, such as through explaining the handling instructions to transporters.

Ensure that the following requirements are met during transportation, as the LCD panel of this unit is made of glass and therefore fragile:

(1) USE A SPECIAL PACKING CASE FOR THE LCD PANEL
When transporting the LCD panel of the unit, use a special packing case (packing materials). A special packing case is used when a LCD panel is supplied as a service spare part.

(2) ATTACH PROTECTION SHEET TO THE FRONT
Since the front (display part) of the panel is vulnerable, attach the protection sheet to the front of the LCD panel before transportation. Protection sheet is used when a LCD panel is supplied as a service spare part.

(3) AVOID VIBRATIONS AND IMPACTS
The unit may be broken if it is toppled sideways even when properly packed. Continuous vibration may shift the gap of the panel, and the unit may not be able to display images properly. Ensure that the unit is carried by at least 2 persons and pay careful attention not to exert any vibration or impact on it.

(4) DO NOT PLACE EQUIPMENT HORIZONTALLY
Ensure that it is placed upright and not horizontally during transportation and storage as the LCD panel is very vulnerable to lateral impacts and may break. During transportation, ensure that the unit is loaded along the traveling direction of the vehicle, and avoid stacking them on one another. For storage, ensure that they are stacked in 2 layers or less even when placed upright.

1.4.2 OPTICAL FILTER (ON THE FRONT OF THE LCD PANEL)

(1) Avoid placing the unit under direct sunlight over a prolonged period of time. This may cause the optical filter to deteriorate in quality and COLOUR.

(2) Clean the filter surface by wiping it softly and lightly with a soft and lightly fuzz cloth (such as outing flannel).

(3) Do not use solvents such as benzene or thinner to wipe the filter surface. This may cause the filter to deteriorate in quality or the coating on the surface to come off. When cleaning the filter, usually use the neutral detergent diluted with water. When cleaning the dirty filter, use water-diluted ethanol.

(4) Since the filter surface is fragile, do not scratch or hit it with hard materials. Be careful enough not to touch the front surface, especially when taking the unit out of the packing case or during transportation.

1.4.3 PRECAUTIONS FOR REPLACEMENT OF EXTERIOR PARTS

Take note of the following when replacing exterior parts (REAR COVER, FRONT PANEL, etc.):

(1) Do not exert pressure on the front of the LCD panel (filter surface). It may cause irregular COLOUR.

(2) Pay careful attention not to scratch or stain the front of the LCD panel (filter surface) with hands.

(3) When replacing exterior parts, the front (LCD panel) should be placed facing downward. Place a mat, etc. underneath to avoid causing scratches to the front (filter surface).

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 FEATURES

ZOOM

This function can change the screen size according to the picture aspect ratio.

OFF TIMER

This function can set the TV to automatically turn off after a set time.

COLOUR SYSTEM

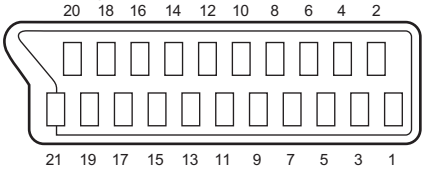
If the picture is not clear or no colour appears, change the current colour system to another colour system.

2.2 21-PIN EURO CONNECTOR (SCART) : EXT-1

Pin No.	Signal designation	Matching value	EXT-1
1	AUDIO R output	500mV(rms) (Nominal),, Low impedance	Used (TV OUT)
2	AUDIO R input	500mV(rms) (Nominal),, High impedance	Used (R1)
3	AUDIO L output	500mV(rms) (Nominal),, Low impedance	Used (TV OUT)
4	AUDIO GND		Used
5	GND (B)		Used
6	AUDIO L input	500mV(rms) (Nominal),, High impedance	Used (L1)
7	B input	$700mV_{(B-W)}$, 75Ω	Used
8	FUNCTION SW (SLOW SW)	Low : 0V-3V High : 8V-12V, High impedance	Used
9	GND (G)		Used
10	SCL / T-V LINK		Not used
11	G input	$700mV_{(B-W)}$, 75Ω	Used
12	SDA		Not used
13	GND (R)		Used
14	GND (YS)		Used
15	R / C input	R : $700mV_{(B-W)}$, 75Ω C : $300mV_{(P-P)}$, 75Ω	Used (R/C)
16	Ys input (FAST SW)	Low : 0V-0.4V, High : 1V-3V, 75Ω	Used
17	GND (VIDEO output)		Used
18	GND (VIDEO input)		Used
19	VIDEO output	$1V_{(P-P)}$ (Negative sync), 75Ω	Used (TV OUT)
20	VIDEO / Y input	$1V_{(P-P)}$ (Negative sync), 75Ω	Used
21	COMMON GND		Used

(P-P= Peak to Peak, B-W= Blanking to white peak)

[Pin assignment]



2.3 TECHNICAL INFORMATION

2.3.1 LCD PANEL

This unit uses the flat type panel LCD (Liquid Crystal Display) panel that occupies as little space as possible, instead of the conventional CRT (Cathode Ray Tube), as a display unit.
Since the unit has the two polarizing filter that are at right angles to each other, the unit adopts "normally black" mode, where light does not pass through the polarizing filter and the screen is black when no voltage is applied to the liquid crystals.

2.3.1.1 SPECIFICATIONS

The following table shows the specifications of this unit.

Item	Specifications	Remarks
Displayed colour	16777216 colours	256 colours for R, G, and B
Brightness	450cd/m^2	
Contrast ratio	800: 1	
Response time	16ms	
View angle	Horizontally: 170°, Vertically: 170°	

2.3.1.2 PIXEL FAULT

There are three pixel faults - bright fault , dark fault and flicker fault - that are respectively defined as follows.

■ **BRIGHT FAULT**

In this pixel fault, a cell that should not light originally is lighting on and off.
For checking this pixel fault, input ALL BLACK SCREEN and find out the cell that is lighting on and off.

■ **DARK FAULT**

In this pixel fault, a cell that should light originally is not lighting or lighting with the brightness twice as brighter as originally lighting.
For checking this pixel fault, input 100% of each R/G/B colour and find out the cell that is not lighting.

■ **FLICKER FAULT**

In the pixel fault, a cell that should light originally or not light originally is flashing on and off.
For checking this pixel fault, input ALL BLACK SCREEN signal or 100% of each RGB colour and find out the cell that is flashing on and off.

SECTION 3
DISASSEMBLY

3.1 DISASSEMBLY PROCEDURE

NOTE:

- Make sure that the power cord is disconnected from the outlet.
- Pay special attention not to break or damage the parts.
- When removing each board, remove the connectors as required.
- Taking notes of the connecting points (connector numbers) makes service procedure manageable.
- Make sure that there is no bent or stain on the connectors before inserting, and firmly insert the connectors.

3.1.1 REMOVING THE HINGE COVER

(1) Remove the 2 screws **[A]**.
(2) Remove the HINGE COVER.

3.1.2 REMOVING THE FOOT TOP COVER

- Remove the HINGE COVER.
  (1) Remove the 2 screws **[B]**.
  (2) Pull out the FOOT TOP COVER.

3.1.3 REMOVING THE FOOT ASSEMBLY

(1) Remove the 4 screws **[C]**.
(2) Remove the FOOT ASSEMBLY.

3.1.4 REMOVING THE HANDLE

- Remove the HINGE COVER.
- Remove the FOOT TOP COVER.
  (1) Remove the 4 screws **[D]**.
  (2) Remove the THE HANDLE.

3.1.5 REMOVIE BACK COVER

- Remove the FOOT ASSEMBLY.
  (1) Remove the 5 screws **[E]**.
  (2) Remove the BACK COVER toward you.

NOTE:

If necessary, remove the HANDLE, SIDE AV DOOR and BACK DOOR.

3.1.6 REMOVING THE SIDE CONTROL PWB

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
  (1) Remove the 2 screws **[F]**.
  (2) Remove the FUNCTION BUTTON with SIDE CONTROL PWB.
  (3) Remove the 4 craws which is fixing the SIDE CONTROL PWB.
  (4) Remove the SIDE CONTROL PWB.

3.1.7 REMOVING THE METAL HANG

- Remove the FOOT ASSEMBLY.
- Remove the HANDLE.
- Remove the BACK COVER.
  (1) Remove the 1 screw **[G]**.
  (2) Remove the METAL HANG.
  (3) Remove the opposite METAL HANG same steps.

3.1.8 REMOVING THE TERMINAL BRACKET

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
  (1) Remove the 2 screws **[H]**.
  (2) Remove the TERMINAL BRACKET.

3.1.9 REMOVING THE MAIN PWB

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
- Remove the TERMINAL BRACKET.
  (1) Remove the 5 screws **[J]**.
  (2) Remove the MAIN PWB.

3.1.10 REMOVING THE REGULATOR PWB

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
  (1) Remove the 4 screws **[K]**.
  (2) Remove the REGULATOR PWB.

3.1.11 REMOVING THE AV JACK BRACKET

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
  (1) Remove the 2 screws **[L]**.
  (2) Remove the AV JACK BRACKET.

3.1.12 REMOVING THE AV JACK PWB

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
- Remove the AV JACK BRACKET.
  (1) Remove the 2 screws **[M]**.
  (2) Remove the AV JACK PWB.

3.1.13 REMOVING THE LED PWB

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
  (1) Remove the 2 screws **[N]**.
  (2) Remove the LED PWB.

3.1.14 REMOVING THE SPEAKER

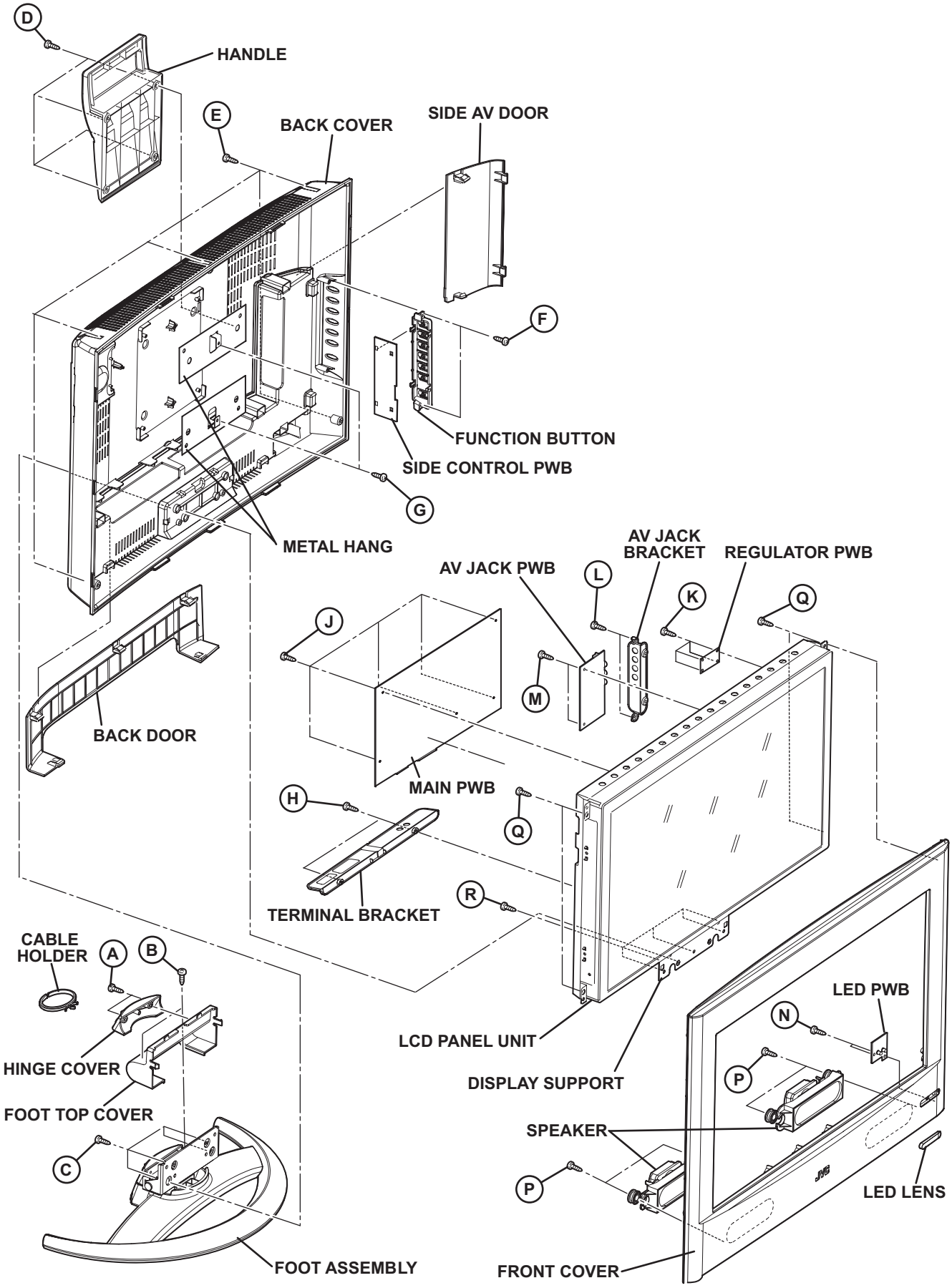
- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
  (1) Remove the speaker wire from speaker terminal.
  (2) Remove the 2 screws **[P]**.
  (3) Remove the SPEAKER.
  (4) Remove the opposite speaker same steps.

3.1.15 REMOVING THE LCD PANEL UNIT

- Remove the FOOT ASSEMBLY.
- Remove the BACK COVER.
- Remove the MAIN PWB.
- Remove the REGULATOR PWB.
- Remove the AV JACK PWB.
  (1) Remove the 4 screws **[Q]**.
  (2) Remove the 5 screws **[R]** fixing the DISPLAY SUPPORT and LCD PANEL UNIT.
  (3) Sightly raise the both sides of the LCD PANEL by hand from the FRONT COVER.

NOTE:

- Pay special attention not to break or damage on the front of the LCD PANEL.
- The LCD PANEL UNIT is fixed to the FRONT COVER (at the back side)by using double-side adhesive tapes. To remove the LCD PANEL UNIT, remove the adhesive tape on the FRONT COVER slowly.


D
HANDLE
E
BACK COVER
SIDE AV DOOR
F
FUNCTION BUTTON
SIDE CONTROL PWB
G
METAL HANG
AV JACK PWB
AV JACK BRACKET
REGULATOR PWB
L
K
Q
J
M
BACK DOOR
MAIN PWB
H
Q
TERMINAL BRACKET
R
CABLE HOLDER
A
B
HINGE COVER
FOOT TOP COVER
C
FOOT ASSEMBLY
LCD PANEL UNIT
DISPLAY SUPPORT
LED PWB
N
P
SPEAKER
P
LED LENS
FRONT COVER

3.2 MEMORY IC REPLACEMENT

- This model uses the memory IC.
- This memory IC stores data for proper operation of the video and drive circuits.
- When replacing, be sure to use an IC containing this (initial value) data.

3.2.1 SETTINGS OF FACTORY SHIPMENT

3.2.1.1 BUTTON OPERATION

Setting item	Setting position
POWER	Off
TV/AV	TV

3.2.1.2 REMOTE CONTROL DIRECT OPERATION

Setting item	Setting position
ZOOM	Auto

3.2.1.3 REMOTE CONTROL MENU OPERATION

(1) PICTURE

Setting item	Setting position
Mode	Bright
Contrast	43 Step
Bright-1	15 Step
Sharpness	40 Step
Colour	29 Step
Bright-2	Max.
Colour Temperature	Cool

(2) SOUND

Setting item	Setting position
Volume	10 Step
Bass	0 Step
Treble	0 Step
Balance	0 Step
Hyper Sound	Off

(3) FEATURE

Setting item	Setting position
Sleep Timer	Off
Child Lock	Off
Language	English
Blue Back	Off

(4) INSTALLATION

Setting item	Setting position
Colour System	AUTO
VCR	Off

3.3 REPLACEMENT OF CHIP COMPONENT

3.3.1 CAUTIONS

(1) Avoid heating for more than 3 seconds.
(2) Do not rub the electrodes and the resist parts of the pattern.
(3) When removing a chip part, melt the solder adequately.
(4) Do not reuse a chip part after removing it.

3.3.2 SOLDERING IRON

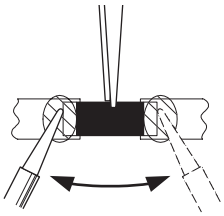
(1) Use a high insulation soldering iron with a thin pointed end of it.
(2) A 30w soldering iron is recommended for easily removing parts.

3.3.3 REPLACEMENT STEPS

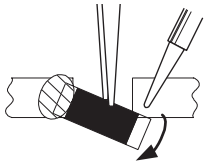
1. How to remove Chip parts

[Resistors, capacitors, etc.]

(1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



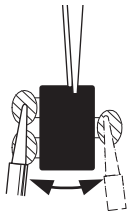
(2) Shift with the tweezers and remove the chip part.



[Transistors, diodes, variable resistors, etc.]

(1) Apply extra solder to each lead.

(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



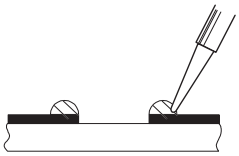
NOTE :

After removing the part, remove remaining solder from the pattern.

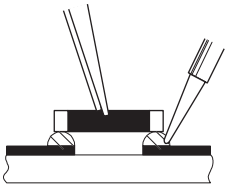
2. How to install Chip parts

[Resistors, capacitors, etc.]

(1) Apply solder to the pattern as indicated in the figure.

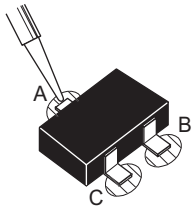


(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

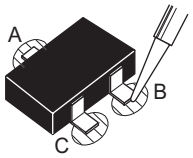


[Transistors, diodes, variable resistors, etc.]

(1) Apply solder to the pattern as indicated in the figure.
(2) Grasp the chip part with tweezers and place it on the solder.
(3) First solder lead **A** as indicated in the figure.



(4) Then solder leads **B** and **C**.



SECTION 4
ADJUSTMENT

4.1 ADJUSTMENT PREPARATION

(1) **The setting (adjustment) using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.**
(2) Make sure that connection is correctly made to AC power source.
(3) Turn on the power of the monitor and measuring instrument for warming up for at least 30 minutes before starting adjustment.
(4) If the input signal is not specified, use the most appropriate signal for adjustment.
(5) Never touch parts (such as variable resistors, transformers and condensers) or setting items/values not shown in the adjustment items of this service adjustment.

4.2 BASIC OPERATION OF UOCIII SERVICE MODE

4.2.1 HOW TO ENTER THE UOCIII SERVICE MODE

(1) Press **[MENU]** key.
(2) Press the **[4]**, **[7]**, **[2]** and **[5]** key, and UOCIII SERVICE MODE screen will be displayed.

UOCIII SERVICE MODE SCREEN

```
          GTV  3.2.1

000   EurAsia TVSub          00.75


00000000   00111100
01000000   01100100
11000101   01100100
00000000   01100100
```

4.2.2 HOW TO EXIT THE UOCIII SERVICE MODE

Press **[MENU]** key to exit the UOCIII SERVICE MODE.

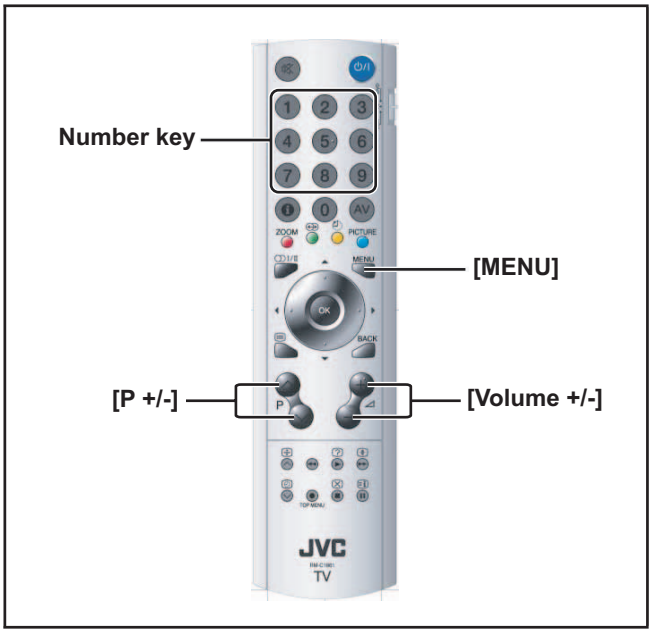
4.2.3 CHANGE AND MEMORY OF SETTING VALUE

■ **SELECTION OF SETTING MENU & ITEM**
- **[P +/-]** key.

■ **CHANGE OF SETTING VALUE(DATA)**
- **[Volume +/-]** key.

■ **MEMORY OF SETTING VALUE(DATA)**
The setting value will be stored automatically when release the REMOTE CONTROL UNIT keys.

4.2.4 UOCIII SERVICE MODE SELECT KEY LOCATION



4.2.5 UOCIII SERVICE MODE SETTING ITEMS

Item No.	Setting items	Function	Variable range	Setting value
000	EurAsia TVSub		---	00.75
001	Init TV	Sets the UOC default values and turns the tv to Stdby	0-1	0
002	ISP Mode	Sets the TV into ISP state.	0-1	0
003	DCXO	DCXO crystal alignment	0-127	77
004	DCXO Auto	Automatic DCXO frequency alignment. When it is set to 1; UOC automaticaly calculates DCXO values and writes it to item number 3.	0-1	0
005	Track. Mode		0-1	0
006	Hor. Shift		0-63	32
007	HBL		0-1	0
008	WBF		0-15	4
009	WBR		0-15	8
010	WSS	WSS (Wide Screen Siganling) enable	0-1	1
011	Gld-SCART		0-1	1
012	Col Fe	Color Saturation adjustment for RF input	0-50	32
013	Col AV1	Color Saturation adjustment for Scart CVBS input	0-50	32
014	Col AV1S		0-50	32
015	Col AV2	Color Saturation adjustment for AV CVBS input	0-50	32
016	Col AV2S	Color Saturation adjustment for for SVHS S-video input	0-50	32
017	BLOR		0-63	32
018	BLOG		0-63	32
019	RGB		0-15	14
020	YSECAM	"Y delay" setting. (SECAM)	0-15	8
021	YNTSC	"Y delay" setting. (NTSC)	0-15	8
022	YPAL	"Y delay" setting. (PAL)	0-15	8
023	YAV1	"Y delay" setting. (SCART)	0-15	4
024	YAV2	"Y delay" setting. (FAV)	0-15	4
025	YSVHS1	"Y delay" setting.	0-15	4
026	YSVHS2	"Y delay" setting. (S-Video)	0-15	4
027	ACL		0-1	0
028	MUS		0-1	0
029	PWL		0-15	8
030	CB		0-1	0
031	BPS		0-1	0
032	FCO		0-1	0
033	PeakFreqPAL443		0-3	2
034	PeakFreqPALM		0-3	2
035	PeakFreqPALN		0-3	2
036	PeakFreqNTSC443		0-3	2
037	PeakFreqNTSCM		0-3	2
038	PeakFreqSECAM		0-3	2
039	PeakFreqAV		0-3	2
040	Blackstretch		0-1	1
041	Bluestretch		0-1	0
042	Whitestretch		0-3	0
043	Transfer Ratio		0-1	1
044	PeakRatioOvShot		0-3	2
045	Tint NTSC		0-50	31
046	OSO		0-1	0
047	FSL		0-1	0
048	HP2		0-1	0
049	SoftClipLevel		0-3	0
050	OP AUDIO CONFIG		0-2	2
051	OP BILING		0-1	1
052	OP HP		0-1	1
053	OP EQUAL		0-1	1
054	OP DOLBY		0-1	0
055	OP TRUSUR		0-1	0
056	OP DUB DBE		0-1	0
057	OP BBE		0-1	0
058	AVL-LEV	AVL Level setting	0-15	1
059	AVL-WGT	AVL Weight setting	0-1	0
060	AVL-MOD	AVL Response Time setting	0-5	2
061	AVLE	AVL enable/disable	0-1	1
062	LOUD-NA		0-7	5
063	LOUD-CH		0-1	1
064	BBE-CONT		0-15	7
065	BBE-PROC		0-15	7
066	OP CLIP		0-4	0
067	DEC-LEV	FM German Str. Prescale setting	0-31	23
068	MONO-LEV	FM Mono Prescale setting	0-31	23
069	NIC-LEV	Nicam Str. Prescale setting	0-31	17
070	ADC-AM-L	AM Mono Prescale setting	0-31	21
071	ADC-AV-L	Scart/Line in Prescale setting	0-31	18
072	BGSCAL DEC		0-31	0
073	BGSCAL MONO		0-31	0
074	BGSCAL NIC		0-31	0
075	BGSCAL SAP		0-31	0
076	MSCAL DEC		0-31	0
077	MSCAL MONO		0-31	0
078	MSCAL NIC		0-31	0
079	MSCAL SAP		0-31	0
080	LSCAL DEC		0-31	0
081	LSCAL MONO		0-31	0
082	LSCAL NIC		0-31	0
083	LSCAL SAP		0-31	0
084	E2D		0-1	0
085	FFI		0-1	0
086	CMUTE		0-1	1
087	PA-BA-VO		0-63	31
088	PA-TR-VO		0-63	15
089	PA-LM-VO		0-4	1
090	PA-ST-VO		0-5	5
091	PA-LO-VO		0-1	0
092	PA-B1-VO		0-63	21
093	PA-B2-VO		0-63	50
094	PA-B3-VO		0-63	55
095	PA-B4-VO		0-63	45
096	PA-B5-VO		0-63	34
097	PA-BA-MU		0-63	34
098	PA-TR-MU		0-63	39
099	PA-LM-MU		0-4	1
100	PA-ST-MU		0-5	5
101	PA-LO-MU		0-1	1
102	PA-B1-MU		0-63	52
103	PA-B2-MU		0-63	47
104	PA-B3-MU		0-63	29
105	PA-B4-MU		0-63	29
106	PA-B5-MU		0-63	45
107	PA-BA-TH		0-63	36

Item No.	Setting items	Function	Variable range	Setting value
108	PA-TR-TH		0-63	34
109	PA-LM-TH		0-4	1
110	PA-ST-TH		0-5	5
111	PA-LO-TH		0-1	0
112	PA-B1-TH		0-63	47
113	PA-B2-TH		0-63	45
114	PA-B3-TH		0-63	42
115	PA-B4-TH		0-63	45
116	PA-B5-TH		0-63	42
117	AGC Speed	AGC Speed setting	0-3	1
118	AGC Take over	AGC setting	0-63	27
119	OIF	IF Demodulator Offset	0-63	32
120	IF	IF Frequency	0-5	2
121	SVO		0-1	0
122	GD		0-1	1
123	BPB		0-1	0
124	BPB2		0-1	0
125	RGB-IN		0-1	1
126	DVD1-IN		0-1	0
127	AV2-IN		0-1	1
128	DVD2-IN		0-1	0
129	AV1S-IN		0-1	1
130	AV1D-IN		0-1	0
131	AV2S-IN		0-1	1
132	CBVS-OUT		0-1	1
133	INCL-AV		0-1	0
134	OTHER1		0-1	0
135	OTHER2		0-1	0
136	TXT-H-POS		0-31	11
137	OTHER:BG-DK		0-1	0
138	TIM-SLP		0-1	1
139	TIM-SW		0-1	1
140	TIM-OFF		0-1	1
141	TIM-SKP		0-1	1
142	TIM-RT		0-1	1
143	PWR-SAVING		0-1	1
144	PWR-PERF		0-3	3
145	PWR-REST		0-1	1
146	PWR-ONKEY		0-1	1
147	Factory Mode		0-1	0
148	CombFil	Combfilter enable/disable	0-1	1
149	ATS		0-1	1
150	EVG		0-1	0
151	DFL		0-1	0
152	XDT		0-1	0
153	AKB		0-1	1
154	OSVE		0-1	0
155	CL		0-15	10
156	LCD-BRT	UOC Brightness	0-63	36
157	LCD-CON	UOC Contrast	0-63	32
158	LCD-CON-FE	RF Frontend Contrast adjust.	0-63	30
159	LCD-CON-AV1	Scart CVBS Contrast adjust.	0-63	32
160	LCD-CON-AV1S		0-63	32
161	LCD-CON-AV2	AV CVBS Contrast adjust.	0-63	32
162	LCD-CON-AV2S	S-Video input Contrast adjust.	0-63	32
163	RBL		0-1	0
164	EGL		0-1	0
165	LPG		0-1	1
166	PGR	UOC Red Contrast	0-127	32
167	PGG-CVBS	UOC Green Contrast for CVBS input	0-127	32
168	PGG-RGB	UOC Green Contrast for RGB input	0-127	34
169	PGB	UOC Blue Contrast	0-127	32

4.3 BASIC OPERATION OF PW SERVICE MODE

4.3.1 HOW TO ENTER THE PW SERVICE MODE

(1) Press **[INFORMATION]** key and **[MUTING]** key simultaneously, and PW SERVICE MODE screen will be displayed.

4.3.2 HOW TO EXIT THE PW SERVICE MODE

Press **[MENU]** key to exit the PW SERVICE MODE.

4.3.3 CHANGE AND MEMORY OF SETTING VALUE

■ **SELECTION OF SETTING MENU & ITEM**

- **[FUNCTION ▲/▼]** and **[FUNCTION ◀ / ▶]** key.

■ **CHANGE OF SETTING VALUE(DATA)**

- **[FUNCTION ◀ / ▶]** key.

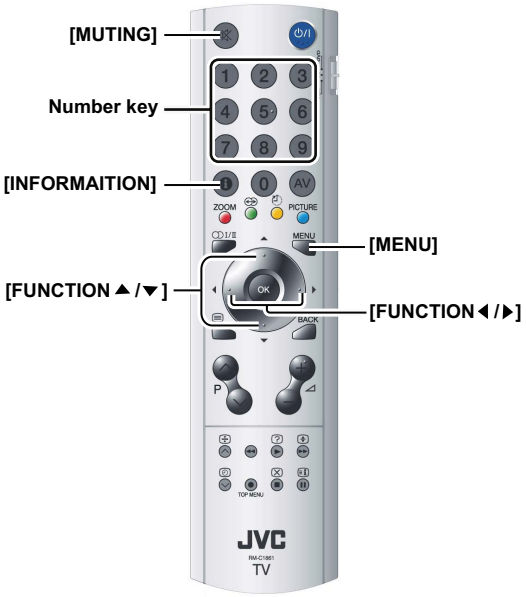
■ **MEMORY OF SETTING VALUE(DATA)**

<In case of Service Submenu 1 and Service Submenu 2>:
The setting value will be stored automatically when release the REMOTE CONTROL UNIT keys.

<In case of Factory Settings 1 and Factory Settings 2>:

(1) Press **[MENU]** key.
(2) Press the **[4]**, **[7]**, **[2]** and **[9]** key to store the setting value.
(3) After storing the setting value, the message "Factory Settings OK" will be displayed.

4.3.4 PW SERVICE MODE SELECT KEY LOCATION



4.3.5 PW SERVICE MODE SETTING ITEMS

Setting menu	Setting items	Setting value
Service Submenu 1	UOC Hposition	128
	ADC_Calibration	-
	UOC_Calibration	-
Service Submenu 2	Panel Type	AU_20_WXGA
	Init NVM	-
	AVL	On
	PC Mode	On
	Burn-In Mode	Off
Factory Settings 1	Initial APS	Off
	Language	English
	Country	-
	Model Name	-

Setting menu	Setting items	Setting value								
	Group	TV-CVBS			S-VIDEO			RGB			PC
	Mode	Bright	Standard	Soft	Bright	Standard	Soft	Bright	Standard	Soft	-
Factory Settings 2	Contrast	43	38	32	43	38	32	43	38	32	10
	Bright-1	15	15	15	15	15	15	20	20	20	20
	Sharpness	40	35	30	40	35	30	40	35	30	-
	Colour	29	27	24	29	27	24	29	27	24	-

SECTION 5
TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.

JVC
Victor Company of Japan, Limited
Flat Panel Display Category 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama-city, Kanagawa-prefecture, 221-8528, Japan

(No.YA381)

Printed in Japan
VPT

PARTS LIST

CAUTION

- The parts identified by the ⚠ symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines --- in the Parts No. columns will not be supplied.
- P.W. BOARD Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS	
CR	Carbon Resistor
FR	Fusible Resistor
PR	Plate Resistor
VR	Variable Resistor
HV R	High Voltage Resistor
MF R	Metal Film Resistor
MG R	Metal Glazed Resistor
MP R	Metal Plate Resistor
OM R	Metal Oxide Film Resistor
CMF R	Coating Metal Film Resistor
UNF R	Non-Flammable Resistor
CH V R	Chip Variable Resistor
CH MG R	Chip Metal Glazed Resistor
COMP. R	Composition Resistor
LPTC R	Linear Positive Temperature Coefficient Resistor

CAPACITORS	
C CAP.	Ceramic Capacitor
E CAP.	Electrolytic Capacitor
M CAP.	Mylar Capacitor
CH CAP.	Chip Capacitor
HV CAP.	High Voltage Capacitor
MF CAP.	Metalized Film Capacitor
MM CAP.	Metalized Mylar Capacitor
MP CAP.	Metalized Polystyrol Capacitor
PP CAP.	Polypropylene Capacitor
PS CAP.	Polystyrol Capacitor
TF CAP.	Thin Film Capacitor
MPP CAP.	Metalized Polypropylene Capacitor
TAN. CAP.	Tantalum Capacitor
CH C CAP.	Chip Ceramic Capacitor
BP E CAP.	Bi-Polar Electrolytic Capacitor
CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

RESISTORS									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

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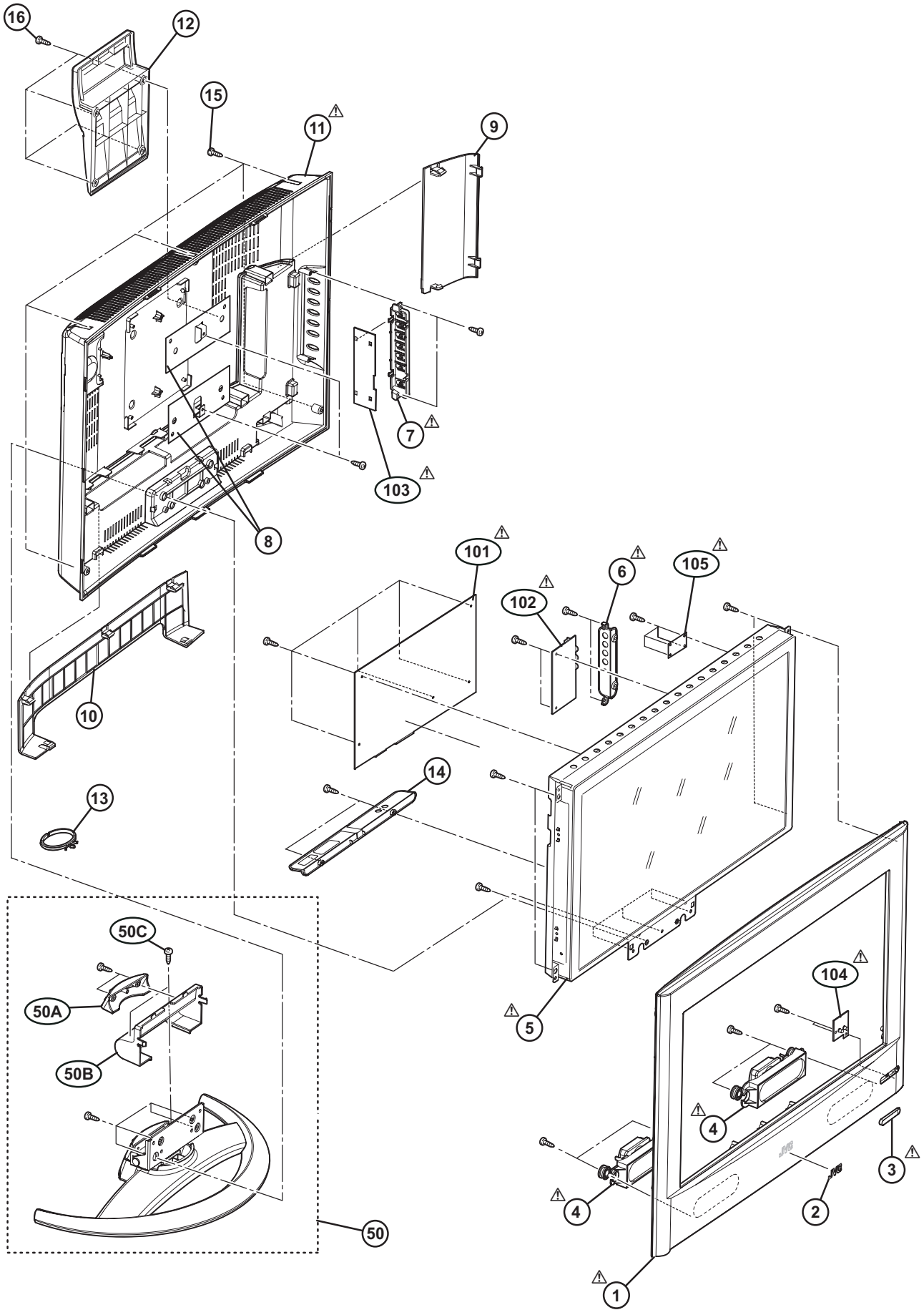
USING P.W. BOARD & REMOTE CONTROL UNIT

P.W.B ASS'Y name	P.W.B ASS'Y No.	
	LT-20A55SJ	LT-20A55SU
MAIN P.W.B	VE-20237199	←
AV JACK P.W.B	VE-20236020	←
SIDE CONTROL P.W.B	VE-20235650	←
LED P.W.B	VE-20247679	←
REGULATOR PWB	VE-20223829	←
REMOTE CONTROL UNIT	VE-30039453	←

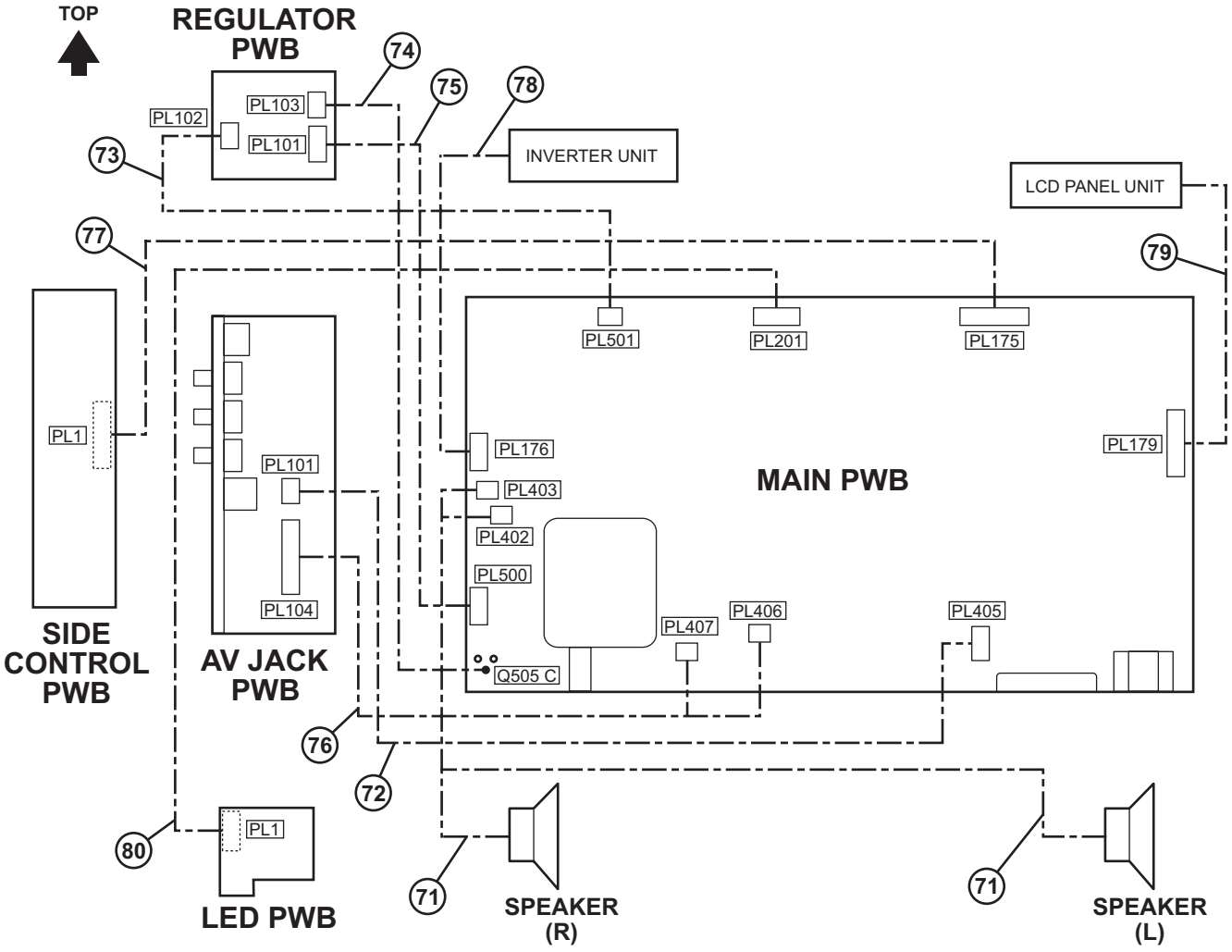
EXPLODED VIEW-1,2 PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
⚠	1	VE-20224798	FRONT COVER		
	2	VE-20181267	LOGO JVC		
⚠	3	VE-20233912	LENS		
⚠	4	VE-30034322	SPEAKER	(x2)	
⚠	5	VE-30041596	LCD PANEL UNIT		
⚠	6	VE-20235932	AV JACK BRACKET		
⚠	7	VE-20224812	FUNCTION BUTTON		
	8	VE-35012930	HANG METAL	(x2)	
	9	VE-20224814	SIDE AV DOOR		
	10	VE-20224816	BACK DOOR		
⚠	11	VE-20224799	BACK COVER		
	12	VE-20182430	HANDLE		
	13	VE-20176416	CABLE HOLDER		
	14	VE-20196634	TERMINAL BOARD		
	15	VE-35008191	SCREW	M3x12 For BACK COVER(x5)	
	16	VE-35000185	SCREW	M4x8 For HANDLE(x4)	
	50	VE-20224796	FOOT ASSY	Incl. 50A-50C	
	50A	VE-20224795	HINGE COVER		
	50B	VE-20224794	FOOT TOP COVER		
	50C	VE-35008090	SCREW	M3.5x12 For FOOT TOP COVER(x2)	
	71	VE-30037904	E-HARNESS ASSY	MAIN - SPEAKER	
	72	VE-30042272	E-HARNESS ASSY	MAIN PL405 - AV JACK PL101	
	73	VE-30042924	E-HARNESS ASSY	MAIN PL501 - REG PL102	
	74	VE-30042943	E-HARNESS ASSY	MAIN - REG PL103	
	75	VE-30042944	E-HARNESS ASSY	MAIN PL500 - REG PL101	
	76	VE-30043854	E-HARNESS ASSY	MAIN - AV JACK PL104	
	77	VE-30045747	E-HARNESS ASSY	MAIN PL175 - SIDE CONTROL PL1	
	78	VE-30042627	E-HARNESS ASSY	MAIN PL176 - INVERTER	
	79	VE-30042628	E-HARNESS ASSY	MAIN PL179 - LCD PANEL	
	80	VE-30039003	E-HARNESS ASSY	MAIN PL201 - LED PL1	
⚠	101	VE-20237199	MAIN PWB		
⚠	102	VE-20236020	AV JACK PWB		
⚠	103	VE-20235650	SIDE CONTROL PWB		
⚠	104	VE-20247679	LED PWB		
⚠	105	VE-20223829	REGULATOR PWB		

EXPLODED VIEW-1



EXPLODED VIEW-2



PRINTED WIRING BOARD PARTS LIST

MAIN P.W. BOARD ASS'Y (VE-20237199)

⚠Ref No.	Part No.	Part Name	Description Local
IC100	VE-30027986	IC	
IC101	VE-20230390	IC	(SERVICE)
IC102	VE-LT-20A55	IC	(SERVICE)
IC175	VE-30029845	IC	
IC176	VE-30033062	IC	
IC177	VE-30026744	IC	
IC203	VE-30028012	IC	
IC400	VE-30018006	IC	
IC401	VE-30010024	IC	
IC403	VE-30010807	IC	
IC404	VE-30010822	IC	
IC405	VE-30019372	IC	
IC410	VE-30031912	IC	
IC411	VE-30031912	IC	
IC500	VE-30033064	IC	
IC501	VE-30020607	IC	
IC502	VE-30033064	IC	
IC503	VE-30033064	IC	
IC504	VE-30020607	IC	
IC505	VE-30028675	IC	
IC507	VE-30018029	TRANSISTOR	
Q200	VE-30001454	TRANSISTOR	
Q203	VE-30001452	TRANSISTOR	
Q204	VE-30001457	TRANSISTOR	
Q205	VE-30001457	TRANSISTOR	
Q206	VE-30024724	TRANSISTOR	
Q207	VE-30001457	TRANSISTOR	
Q208	VE-30001457	TRANSISTOR	
Q209	VE-30001452	TRANSISTOR	
Q210	VE-30024724	TRANSISTOR	
Q211	VE-30029775	TRANSISTOR	
Q212	VE-30029775	TRANSISTOR	
Q213	VE-30001457	TRANSISTOR	
Q400	VE-30001457	TRANSISTOR	
Q401	VE-30001457	TRANSISTOR	
Q402	VE-30001458	TRANSISTOR	
Q403	VE-30001457	TRANSISTOR	
Q404	VE-30001457	TRANSISTOR	
Q405	VE-30001457	TRANSISTOR	
Q406	VE-30001457	TRANSISTOR	
Q407	VE-30001457	TRANSISTOR	
Q409	VE-30001458	TRANSISTOR	
Q410	VE-30001457	TRANSISTOR	
Q502	VE-30001457	TRANSISTOR	
Q503	VE-30001457	TRANSISTOR	
Q702	VE-30001457	TRANSISTOR	
Q703	VE-30018060	TRANSISTOR	
D175	VE-30001285	DIODE	
D176	VE-30001285	DIODE	
D177	VE-30001285	DIODE	
D200	VE-30001285	DIODE	
D201	VE-30007169	DIODE	
D202	VE-30001377	Z DIODE	
D203	VE-30001285	DIODE	
D204	VE-30012411	DIODE	
D400	VE-30007169	DIODE	
D401	VE-30007169	DIODE	
D402	VE-30007169	DIODE	
D403	VE-30007169	DIODE	
D404	VE-30007169	DIODE	
D405	VE-30007169	DIODE	
D406	VE-30007169	DIODE	
D407	VE-30019996	DIODE	
D408	VE-30038476	Z DIODE	
D409	VE-30038476	Z DIODE	
D410	VE-30038476	Z DIODE	
D411	VE-30038476	Z DIODE	
D412	VE-30038476	Z DIODE	
D413	VE-30038476	Z DIODE	
D414	VE-30038476	Z DIODE	
D415	VE-30038476	Z DIODE	
D417	VE-30001285	DIODE	
D500	VE-30001313	DIODE	
C100	VE-30012603	CAPACITOR	100nF 25V K
C101	VE-30012603	CAPACITOR	100nF 25V K
C102	VE-30012608	CAPACITOR	27pF 50V J
C103	VE-30012608	CAPACITOR	27pF 50V J
C104	VE-30016654	CAPACITOR	100nF 16V K
C105	VE-30016654	CAPACITOR	100nF 16V K
C106	VE-30020694	CAPACITOR	1uF 16V Z
C107	VE-30020694	CAPACITOR	1uF 16V Z
C108	VE-30012582	CAPACITOR	10nF 50V K
C109	VE-30012582	CAPACITOR	10nF 50V K
C110	VE-30016654	CAPACITOR	100nF 16V K
C111	VE-30016654	CAPACITOR	100nF 16V K
C112	VE-30016654	CAPACITOR	100nF 16V K
C113	VE-30016654	CAPACITOR	100nF 16V K
C114	VE-30016654	CAPACITOR	100nF 16V K
C116	VE-30016654	CAPACITOR	100nF 16V K
C117	VE-30016654	CAPACITOR	100nF 16V K
C118	VE-30016654	CAPACITOR	100nF 16V K
C119	VE-30016654	CAPACITOR	100nF 16V K
C120	VE-30016654	CAPACITOR	100nF 16V K
C121	VE-30016654	CAPACITOR	100nF 16V K
C122	VE-30016654	CAPACITOR	100nF 16V K
C123	VE-30012564	CAPACITOR	18pF 50V J
C124	VE-30016654	CAPACITOR	100nF 16V K
C125	VE-30012560	CAPACITOR	100pF 50V J
C126	VE-30012610	CAPACITOR	10nF 50V J
C127	VE-30037180	CAPACITOR	3.9nF 50V J
C128	VE-30037178	CAPACITOR	39nF 25 J
C130	VE-30016654	CAPACITOR	100nF 16V K
C131	VE-30016654	CAPACITOR	100nF 16V K
C132	VE-30012560	CAPACITOR	100pF 50V J
C133	VE-30012610	CAPACITOR	10nF 50V J
C134	VE-30016654	CAPACITOR	100nF 16V K
C135	VE-30016654	CAPACITOR	100nF 16V K
C136	VE-30012590	CAPACITOR	47nF 50V K
C138	VE-30016654	CAPACITOR	100nF 16V K
C139	VE-30016654	CAPACITOR	100nF 16V K
C140	VE-30016654	CAPACITOR	100nF 16V K
C141	VE-30012590	CAPACITOR	47nF 50V K
C142	VE-30012581	CAPACITOR	1nF 50V K
C143	VE-30016654	CAPACITOR	100nF 16V K
C144	VE-30016654	CAPACITOR	100nF 16V K
C145	VE-30016654	CAPACITOR	100nF 16V K
C146	VE-30016654	CAPACITOR	100nF 16V K
C147	VE-30016654	CAPACITOR	100nF 16V K
C148	VE-30012590	CAPACITOR	47nF 50V K
C149	VE-30016654	CAPACITOR	100nF 16V K
C151	VE-30016654	CAPACITOR	100nF 16V K
C154	VE-30012559	CAPACITOR	10pF 50V D
C156	VE-30031604	CAPACITOR	10pF 50V F
C157	VE-30031604	CAPACITOR	10pF 50V F
C158	VE-30031604	CAPACITOR	10pF 50V F
C159	VE-30031604	CAPACITOR	10pF 50V F
C160	VE-30031604	CAPACITOR	10pF 50V F
C161	VE-30031604	CAPACITOR	10pF 50V F
C176	VE-30012582	CAPACITOR	10nF 50V K
C177	VE-30016654	CAPACITOR	100nF 16V K
C178	VE-30016654	CAPACITOR	100nF 16V K
C179	VE-30016654	CAPACITOR	100nF 16V K
C180	VE-30012582	CAPACITOR	10nF 50V K
C181	VE-30012582	CAPACITOR	10nF 50V K
C182	VE-30012582	CAPACITOR	10nF 50V K
C185	VE-30012582	CAPACITOR	10nF 50V K
C186	VE-30020694	CAPACITOR	1uF 16V Z
C188	VE-30012582	CAPACITOR	10nF 50V K
C189	VE-30020694	CAPACITOR	1uF 16V Z
C191	VE-30000384	E CAPACITOR	2.2uF 50V M
C192	VE-30012582	CAPACITOR	10nF 50V K
C193	VE-30012603	CAPACITOR	100nF 25V K
C194	VE-30000353	E CAPACITOR	100uF 25V M
C195	VE-30012582	CAPACITOR	10nF 50V K
C197	VE-30012582	CAPACITOR	10nF 50V K
C198	VE-30020694	CAPACITOR	1uF 16V Z
C199	VE-30012603	CAPACITOR	100nF 25V K
C206	VE-30000400	E CAPACITOR	47uF 50V M
C217	VE-30000345	E CAPACITOR	10uF 50V M
C218	VE-30016654	CAPACITOR	100nF 16V K
C220	VE-30012603	CAPACITOR	100nF 25V K
C222	VE-30000352	E CAPACITOR	100uF 16V M
C223	VE-30000345	E CAPACITOR	10uF 50V M
C225	VE-30012603	CAPACITOR	100nF 25V K
C231	VE-30012590	CAPACITOR	47nF 50V K
C233	VE-30016654	CAPACITOR	100nF 16V K
C241	VE-30012589	CAPACITOR	4.7nF 50V K
C242	VE-30016654	CAPACITOR	100nF 16V K
C244	VE-30016654	CAPACITOR	100nF 16V K
C245	VE-30016654	CAPACITOR	100nF 16V K
C246	VE-30016654	CAPACITOR	100nF 16V K
C249	VE-30016126	CAPACITOR	220nF 16V K
C250	VE-30000345	E CAPACITOR	10uF 50V M
C252	VE-30012589	CAPACITOR	4.7nF 50V K
C253	VE-30016654	CAPACITOR	100nF 16V K
C254	VE-30000352	E CAPACITOR	100uF 16V M
C255	VE-30016126	CAPACITOR	220nF 16V K
C256	VE-30016126	CAPACITOR	220nF 16V K
C257	VE-30016654	CAPACITOR	100nF 16V K

⚠Ref No.	Part No.	Part Name	Description	Local
C258	VE-30012568	CAPACITOR	270pF 50V J	
C259	VE-30016654	CAPACITOR	100nF 16V K	
C260	VE-30016654	CAPACITOR	100nF 16V K	
C261	VE-30000352	E CAPACITOR	100uF 16V M	
C262	VE-30016654	CAPACITOR	100nF 16V K	
C263	VE-30012588	CAPACITOR	33nF 50V K	
C264	VE-30000352	E CAPACITOR	100uF 16V M	
C265	VE-30016654	CAPACITOR	100nF 16V K	
C266	VE-30016126	CAPACITOR	220nF 16V K	
C267	VE-30012588	CAPACITOR	33nF 50V K	
C268	VE-30000352	E CAPACITOR	100uF 16V M	
C271	VE-30016654	CAPACITOR	100nF 16V K	
C273	VE-30016654	CAPACITOR	100nF 16V K	
C274	VE-30016654	CAPACITOR	100nF 16V K	
C275	VE-30016654	CAPACITOR	100nF 16V K	
C276	VE-30016654	CAPACITOR	100nF 16V K	
C277	VE-30000400	E CAPACITOR	47uF 50V M	
C278	VE-30012581	CAPACITOR	1nF 50V K	
C279	VE-30012590	CAPACITOR	47nF 50V K	
C281	VE-30016126	CAPACITOR	220nF 16V K	
C282	VE-30016654	CAPACITOR	100nF 16V K	
C283	VE-30016654	CAPACITOR	100nF 16V K	
C284	VE-30016126	CAPACITOR	220nF 16V K	
C285	VE-30016126	CAPACITOR	220nF 16V K	
C286	VE-30016654	CAPACITOR	100nF 16V K	
C287	VE-30016654	CAPACITOR	100nF 16V K	
C288	VE-30016654	CAPACITOR	100nF 16V K	
C289	VE-30016654	CAPACITOR	100nF 16V K	
C290	VE-30016654	CAPACITOR	100nF 16V K	
C292	VE-30000384	E CAPACITOR	2.2uF 50V M	
C293	VE-30016654	CAPACITOR	100nF 16V K	
C294	VE-30016654	CAPACITOR	100nF 16V K	
C295	VE-30016654	CAPACITOR	100nF 16V K	
C296	VE-30000352	E CAPACITOR	100uF 16V M	
C298	VE-30000384	E CAPACITOR	2.2uF 50V M	
C299	VE-30016654	CAPACITOR	100nF 16V K	
C301	VE-30012581	CAPACITOR	1nF 50V K	
C302	VE-30016654	CAPACITOR	100nF 16V K	
C303	VE-30000345	E CAPACITOR	10uF 50V M	
C304	VE-30016126	CAPACITOR	220nF 16V K	
C305	VE-30000345	E CAPACITOR	10uF 50V M	
C306	VE-30016126	CAPACITOR	220nF 16V K	
C307	VE-30016126	CAPACITOR	220nF 16V K	
C308	VE-30016654	CAPACITOR	100nF 16V K	
C309	VE-30016126	CAPACITOR	220nF 16V K	
C310	VE-30016654	CAPACITOR	100nF 16V K	
C311	VE-30012592	CAPACITOR	6.8nF 50V K	
C312	VE-30016654	CAPACITOR	100nF 16V K	
C313	VE-30016126	CAPACITOR	220nF 16V K	
C314	VE-30000092	CAPACITOR	220nF 63V J	
C315	VE-30000352	E CAPACITOR	100uF 16V M	
C316	VE-30000345	E CAPACITOR	10uF 50V M	
C317	VE-30016127	CAPACITOR	6.8pF 50V D	
C318	VE-30016127	CAPACITOR	6.8pF 50V D	
C320	VE-30000345	E CAPACITOR	10uF 50V M	
C321	VE-30016654	CAPACITOR	100nF 16V K	
C322	VE-30016654	CAPACITOR	100nF 16V K	
C323	VE-30000362	E CAPACITOR	1uF 50V M	
C324	VE-30016654	CAPACITOR	100nF 16V K	
C325	VE-30016654	CAPACITOR	100nF 16V K	
C326	VE-30000352	E CAPACITOR	100uF 16V M	
C327	VE-30016654	CAPACITOR	100nF 16V K	
C328	VE-30016654	CAPACITOR	100nF 16V K	
C329	VE-30016654	CAPACITOR	100nF 16V K	
C330	VE-30016654	CAPACITOR	100nF 16V K	
C333	VE-30016654	CAPACITOR	100nF 16V K	
C334	VE-30016654	CAPACITOR	100nF 16V K	
C336	VE-30020694	CAPACITOR	1uF 16V Z	
C337	VE-30000345	E CAPACITOR	10uF 50V M	
C338	VE-30012582	CAPACITOR	10nF 50V K	
C339	VE-30016654	CAPACITOR	100nF 16V K	
C340	VE-30000393	E CAPACITOR	3.3uF 50V M	
C341	VE-30016654	CAPACITOR	100nF 16V K	
C342	VE-30016654	CAPACITOR	100nF 16V K	
C347	VE-30016654	CAPACITOR	100nF 16V K	
C349	VE-30012573	CAPACITOR	47pF 50V J	
C350	VE-30012573	CAPACITOR	47pF 50V J	
C351	VE-30012573	CAPACITOR	47pF 50V J	
C352	VE-30012573	CAPACITOR	47pF 50V J	
C353	VE-30012573	CAPACITOR	47pF 50V J	
C354	VE-30012573	CAPACITOR	47pF 50V J	
C355	VE-30012573	CAPACITOR	47pF 50V J	
C356	VE-30012573	CAPACITOR	47pF 50V J	
C357	VE-30012573	CAPACITOR	47pF 50V J	
C358	VE-30012573	CAPACITOR	47pF 50V J	
C359	VE-30012573	CAPACITOR	47pF 50V J	
C360	VE-30012573	CAPACITOR	47pF 50V J	
C361	VE-30012573	CAPACITOR	47pF 50V J	
C364	VE-30012573	CAPACITOR	47pF 50V J	
C365	VE-30012573	CAPACITOR	47pF 50V J	
C366	VE-30012573	CAPACITOR	47pF 50V J	
C367	VE-30012573	CAPACITOR	47pF 50V J	
C368	VE-30012573	CAPACITOR	47pF 50V J	
C369	VE-30012573	CAPACITOR	47pF 50V J	
C370	VE-30012573	CAPACITOR	47pF 50V J	
C400	VE-30016654	CAPACITOR	100nF 16V K	
C403	VE-30012560	CAPACITOR	100pF 50V J	
C404	VE-30012560	CAPACITOR	100pF 50V J	
C405	VE-30012560	CAPACITOR	100pF 50V J	
C406	VE-30012581	CAPACITOR	1nF 50V K	
C407	VE-30012581	CAPACITOR	1nF 50V K	
C410	VE-30012559	CAPACITOR	10pF 50V D	
C413	VE-30012559	CAPACITOR	10pF 50V D	
C414	VE-30012559	CAPACITOR	10pF 50V D	
C415	VE-30012581	CAPACITOR	1nF 50V K	
C416	VE-30012581	CAPACITOR	1nF 50V K	
C417	VE-30012581	CAPACITOR	1nF 50V K	
C418	VE-30012581	CAPACITOR	1nF 50V K	
C419	VE-30012560	CAPACITOR	100pF 50V J	
C420	VE-30012560	CAPACITOR	100pF 50V J	
C421	VE-30012560	CAPACITOR	100pF 50V J	
C422	VE-30016654	CAPACITOR	100nF 16V K	
C423	VE-30016654	CAPACITOR	100nF 16V K	
C424	VE-30016654	CAPACITOR	100nF 16V K	
C425	VE-30012560	CAPACITOR	100pF 50V J	
C426	VE-30012588	CAPACITOR	33nF 50V K	
C427	VE-30012560	CAPACITOR	100pF 50V J	
C428	VE-30012560	CAPACITOR	100pF 50V J	
C429	VE-30012581	CAPACITOR	1nF 50V K	
C430	VE-30012581	CAPACITOR	1nF 50V K	
C431	VE-30012573	CAPACITOR	47pF 50V J	
C432	VE-30012573	CAPACITOR	47pF 50V J	
C433	VE-30012573	CAPACITOR	47pF 50V J	
C434	VE-30000345	E CAPACITOR	10uF 50V M	
C435	VE-30000345	E CAPACITOR	10uF 50V M	
C436	VE-30000345	E CAPACITOR	10uF 50V M	
C437	VE-30000345	E CAPACITOR	10uF 50V M	
C438	VE-30016654	CAPACITOR	100nF 16V K	
C439	VE-30016654	CAPACITOR	100nF 16V K	
C440	VE-30012568	CAPACITOR	270pF 50V J	
C441	VE-30012568	CAPACITOR	270pF 50V J	
C442	VE-30000345	E CAPACITOR	10uF 50V M	
C443	VE-30012581	CAPACITOR	1nF 50V K	
C444	VE-30012568	CAPACITOR	270pF 50V J	
C445	VE-30000352	E CAPACITOR	100uF 16V M	
C449	VE-30024768	CAPACITOR	470nF 16V Z	
C450	VE-30034074	E CAPACITOR	100uF 25V M	
C451	VE-30024768	CAPACITOR	470nF 16V Z	
C453	VE-30020694	CAPACITOR	1uF 16V Z	
C455	VE-30020694	CAPACITOR	1uF 16V Z	
C457	VE-30016654	CAPACITOR	100nF 16V K	
C459	VE-30000345	E CAPACITOR	10uF 50V M	
C460	VE-30012568	CAPACITOR	270pF 50V J	
C461	VE-30012560	CAPACITOR	100pF 50V J	
C462	VE-30012568	CAPACITOR	270pF 50V J	
C463	VE-30012603	CAPACITOR	100nF 25V K	
C464	VE-30012603	CAPACITOR	100nF 25V K	
C466	VE-30016085	E CAPACITOR	10uF 63V	
C467	VE-30000407	E CAPACITOR	470uF 16V M	
C471	VE-30016654	CAPACITOR	100nF 16V K	
C472	VE-30000352	E CAPACITOR	100uF 16V M	
C473	VE-30012560	CAPACITOR	100pF 50V J	
C474	VE-30000352	E CAPACITOR	100uF 16V M	
C475	VE-30012589	CAPACITOR	4.7nF 50V K	
C476	VE-30012589	CAPACITOR	4.7nF 50V K	
C477	VE-30020694	CAPACITOR	1uF 16V Z	
C478	VE-30016654	CAPACITOR	100nF 16V K	
C479	VE-30016654	CAPACITOR	100nF 16V K	
C484	VE-30012509	RESISTOR	1/16W 100K J	
C501	VE-30016654	CAPACITOR	100nF 16V K	
C502	VE-30016654	CAPACITOR	100nF 16V K	
C503	VE-30016654	CAPACITOR	100nF 16V K	
C504	VE-30016654	CAPACITOR	100nF 16V K	
C505	VE-30016654	CAPACITOR	100nF 16V K	
C506	VE-30000352	E CAPACITOR	100uF 16V M	
C507	VE-30000352	E CAPACITOR	100uF 16V M	
C508	VE-30000352	E CAPACITOR	100uF 16V M	
C510	VE-30000352	E CAPACITOR	100uF 16V M	
C511	VE-30016654	CAPACITOR	100nF 16V K	
C512	VE-30016654	CAPACITOR	100nF 16V K	
C513	VE-30016654	CAPACITOR	100nF 16V K	
C514	VE-30016654	CAPACITOR	100nF 16V K	
C515	VE-30016654	CAPACITOR	100nF 16V K	
C516	VE-30016654	CAPACITOR	100nF 16V K	
C517	VE-30016654	CAPACITOR	100nF 16V K	
C518	VE-30016654	CAPACITOR	100nF 16V K	
C519	VE-30016654	CAPACITOR	100nF 16V K	
C520	VE-30016654	CAPACITOR	100nF 16V K	
C521	VE-30000410	E CAPACITOR	470uF 50V M	
C522	VE-30000352	E CAPACITOR	100uF 16V M	

⚠Ref No.	Part No.	Part Name	Description Local
C523	VE-30000352	E CAPACITOR	100uF 16V M
C524	VE-30000352	E CAPACITOR	100uF 16V M
C525	VE-30000352	E CAPACITOR	100uF 16V M
C526	VE-30000352	E CAPACITOR	100uF 16V M
C527	VE-30012582	CAPACITOR	10nF 50V K
C531	VE-30018901	E CAPACITOR	100uF 50V M
C532	VE-30012582	CAPACITOR	10nF 50V K
C533	VE-30012574	CAPACITOR	470pF 50V J
C534	VE-30012603	CAPACITOR	100nF 25V K
C535	VE-30016085	E CAPACITOR	10uF 63V
C536	VE-30016654	CAPACITOR	100nF 16V K
C537	VE-30016654	CAPACITOR	100nF 16V K
C538	VE-30012603	CAPACITOR	100nF 25V K
C539	VE-30016654	CAPACITOR	100nF 16V K
C540	VE-30016654	CAPACITOR	100nF 16V K
C541	VE-30005819	E CAPACITOR	1000uF 16V M
C542	VE-30000407	E CAPACITOR	470uF 16V M
C543	VE-30016654	CAPACITOR	100nF 16V K
C544	VE-30000352	E CAPACITOR	100uF 16V M
C545	VE-30016126	CAPACITOR	220nF 16V K
R100	VE-30012510	RESISTOR	1/16W 100R J
R101	VE-30012510	RESISTOR	1/16W 100R J
R102	VE-30012641	RESISTOR	1/16W 10K J
R103	VE-30012677	RESISTOR	1/16W 3.3K J
R104	VE-30012641	RESISTOR	1/16W 10K J
R105	VE-30012641	RESISTOR	1/16W 10K J
R106	VE-30012677	RESISTOR	1/16W 3.3K J
R107	VE-30012677	RESISTOR	1/16W 3.3K J
R108	VE-30012677	RESISTOR	1/16W 3.3K J
R109	VE-30012507	RESISTOR	1/16W 1.5M J
R110	VE-30012677	RESISTOR	1/16W 3.3K J
R111	VE-30012510	RESISTOR	1/16W 100R J
R112	VE-30012510	RESISTOR	1/16W 100R J
R113	VE-30012510	RESISTOR	1/16W 100R J
R114	VE-30012510	RESISTOR	1/16W 100R J
R115	VE-30012510	RESISTOR	1/16W 100R J
R116	VE-30012510	RESISTOR	1/16W 100R J
R117	VE-30012677	RESISTOR	1/16W 3.3K J
R118	VE-30012677	RESISTOR	1/16W 3.3K J
R123	VE-30012641	RESISTOR	1/16W 10K J
R124	VE-30012641	RESISTOR	1/16W 10K J
R125	VE-30012641	RESISTOR	1/16W 10K J
R126	VE-30012641	RESISTOR	1/16W 10K J
R127	VE-30012677	RESISTOR	1/16W 3.3K J
R135	VE-30020529	FERRITE	
R136	VE-30012677	RESISTOR	1/16W 3.3K J
R137	VE-30012677	RESISTOR	1/16W 3.3K J
R138	VE-30012677	RESISTOR	1/16W 3.3K J
R142	VE-30030692	FERRITE NET	
R143	VE-30030692	FERRITE NET	
R144	VE-30030692	FERRITE NET	
R145	VE-30030692	FERRITE NET	
R146	VE-30030692	FERRITE NET	
R147	VE-30030692	FERRITE NET	
R149	VE-30012510	RESISTOR	1/16W 100R J
R152	VE-30012510	RESISTOR	1/16W 100R J
R153	VE-30012510	RESISTOR	1/16W 100R J
R154	VE-30012510	RESISTOR	1/16W 100R J
R155	VE-30012510	RESISTOR	1/16W 100R J
R156	VE-30012692	RESISTOR	1/16W 4.7K J
R175	VE-30012641	RESISTOR	1/16W 10K J
R176	VE-30012641	RESISTOR	1/16W 10K J
R177	VE-30012641	RESISTOR	1/16W 10K J
R178	VE-30012641	RESISTOR	1/16W 10K J
R179	VE-30012641	RESISTOR	1/16W 10K J
R180	VE-30012641	RESISTOR	1/16W 10K J
R181	VE-30012641	RESISTOR	1/16W 10K J
R182	VE-30012641	RESISTOR	1/16W 10K J
R183	VE-30012641	RESISTOR	1/16W 10K J
R184	VE-30012641	RESISTOR	1/16W 10K J
R185	VE-30012510	RESISTOR	1/16W 100R J
R186	VE-30012510	RESISTOR	1/16W 100R J
R187	VE-30012641	RESISTOR	1/16W 10K J
R188	VE-30012641	RESISTOR	1/16W 10K J
R190	VE-30012510	RESISTOR	1/16W 100R J
R191	VE-30012641	RESISTOR	1/16W 10K J
R192	VE-30012641	RESISTOR	1/16W 10K J
R196	VE-30012677	RESISTOR	1/16W 3.3K J
R197	VE-30012669	RESISTOR	1/16W 22K J
R198	VE-30012641	RESISTOR	1/16W 10K J
R206	VE-30012669	RESISTOR	1/16W 22K J
R207	VE-30012708	RESISTOR	1/16W 68K J
R208	VE-30012641	RESISTOR	1/16W 10K J
R211	VE-30012510	RESISTOR	1/16W 100R J
R213	VE-30012510	RESISTOR	1/16W 100R J
R216	VE-30000464	RESISTOR	1/10W 100R J
R217	VE-30000464	RESISTOR	1/10W 100R J
R224	VE-30012641	RESISTOR	1/16W 10K J
R225	VE-30012692	RESISTOR	1/16W 4.7K J

⚠Ref No.	Part No.	Part Name	Description Local
R226	VE-30012692	RESISTOR	1/16W 4.7K J
R227	VE-30012510	RESISTOR	1/16W 100R J
R228	VE-30012510	RESISTOR	1/16W 100R J
R229	VE-30012510	RESISTOR	1/16W 100R J
R230	VE-30012674	RESISTOR	1/16W 27K J
R231	VE-30012982	RESISTOR	1/16W 10R J
R232	VE-30012696	RESISTOR	1/16W 47K J
R233	VE-30012641	RESISTOR	1/16W 10K J
R234	VE-30000706	RESISTOR	1/4W 47R J
R235	VE-30012677	RESISTOR	1/16W 3.3K J
R236	VE-30012510	RESISTOR	1/16W 100R J
R237	VE-30012510	RESISTOR	1/16W 100R J
R238	VE-30012510	RESISTOR	1/16W 100R J
R239	VE-30012677	RESISTOR	1/16W 3.3K J
R244	VE-30012692	RESISTOR	1/16W 4.7K J
R245	VE-30012677	RESISTOR	1/16W 3.3K J
R246	VE-30012677	RESISTOR	1/16W 3.3K J
R250	VE-30012510	RESISTOR	1/16W 100R J
R251	VE-30012510	RESISTOR	1/16W 100R J
R254	VE-30012510	RESISTOR	1/16W 100R J
R255	VE-30012684	RESISTOR	1/16W 330R J
R256	VE-30012688	RESISTOR	1/16W 390R J
R257	VE-30012510	RESISTOR	1/16W 100R J
R258	VE-30012692	RESISTOR	1/16W 4.7K J
R259	VE-30012641	RESISTOR	1/16W 10K J
R260	VE-30012510	RESISTOR	1/16W 100R J
R261	VE-30012510	RESISTOR	1/16W 100R J
R262	VE-30012684	RESISTOR	1/16W 330R J
R263	VE-30012684	RESISTOR	1/16W 330R J
R264	VE-30012657	RESISTOR	1/16W 1K J
R265	VE-30012657	RESISTOR	1/16W 1K J
R266	VE-30012509	RESISTOR	1/16W 100K J
R267	VE-30012689	RESISTOR	1/16W 39K J
R268	VE-30012507	RESISTOR	1/16W 1.5M J
R269	VE-30012692	RESISTOR	1/16W 4.7K J
R270	VE-30012657	RESISTOR	1/16W 1K J
R271	VE-30012644	RESISTOR	1/16W 12K J
R272	VE-30015578	RESISTOR	1/16W 2.2R J
R273	VE-30012696	RESISTOR	1/16W 47K J
R274	VE-30015578	RESISTOR	1/16W 2.2R J
R275	VE-30012644	RESISTOR	1/16W 12K J
R276	VE-30012641	RESISTOR	1/16W 10K J
R277	VE-30012707	RESISTOR	1/16W 680R J
R278	VE-30012692	RESISTOR	1/16W 4.7K J
R279	VE-30012657	RESISTOR	1/16W 1K J
R280	VE-30012696	RESISTOR	1/16W 47K J
R281	VE-30012648	RESISTOR	1/16W 150K J
R282	VE-30012692	RESISTOR	1/16W 4.7K J
R283	VE-30012641	RESISTOR	1/16W 10K J
R284	VE-30012641	RESISTOR	1/16W 10K J
R285	VE-30015578	RESISTOR	1/16W 2.2R J
R286	VE-30012510	RESISTOR	1/16W 100R J
R287	VE-30012641	RESISTOR	1/16W 10K J
R288	VE-30015578	RESISTOR	1/16W 2.2R J
R289	VE-30012641	RESISTOR	1/16W 10K J
R290	VE-30012669	RESISTOR	1/16W 22K J
R291	VE-30012657	RESISTOR	1/16W 1K J
R292	VE-30012510	RESISTOR	1/16W 100R J
R293	VE-30012510	RESISTOR	1/16W 100R J
R294	VE-30012696	RESISTOR	1/16W 47K J
R310	VE-30012668	RESISTOR	1/16W 220R J
R311	VE-30012668	RESISTOR	1/16W 220R J
R400	VE-30000797	RESISTOR	1/10W 75R J
R401	VE-30000797	RESISTOR	1/10W 75R J
R402	VE-30000797	RESISTOR	1/10W 75R J
R403	VE-30012510	RESISTOR	1/16W 100R J
R404	VE-30012510	RESISTOR	1/16W 100R J
R405	VE-30012510	RESISTOR	1/16W 100R J
R406	VE-30000469	RESISTOR	1/10W 1K J
R407	VE-30000469	RESISTOR	1/10W 1K J
R413	VE-30000797	RESISTOR	1/10W 75R J
R414	VE-30012677	RESISTOR	1/16W 3.3K J
R415	VE-30012668	RESISTOR	1/16W 220R J
R416	VE-30000797	RESISTOR	1/10W 75R J
R417	VE-30012677	RESISTOR	1/16W 3.3K J
R418	VE-30012668	RESISTOR	1/16W 220R J
R419	VE-30000797	RESISTOR	1/10W 75R J
R422	VE-30000469	RESISTOR	1/10W 1K J
R423	VE-30012510	RESISTOR	1/16W 100R J
R424	VE-30012510	RESISTOR	1/16W 100R J
R425	VE-30012510	RESISTOR	1/16W 100R J
R429	VE-30000797	RESISTOR	1/10W 75R J
R430	VE-30000469	RESISTOR	1/10W 1K J
R431	VE-30000797	RESISTOR	1/10W 75R J
R432	VE-30000475	RESISTOR	1/10W 10K J
R433	VE-30012677	RESISTOR	1/16W 3.3K J
R434	VE-30000797	RESISTOR	1/10W 75R J
R435	VE-30000797	RESISTOR	1/10W 75R J
R436	VE-30012510	RESISTOR	1/16W 100R J
R437	VE-30012659	RESISTOR	1/16W 2.2K J

⚠Ref No.	Part No.	Part Name	Description	Local
R438	VE-30012707	RESISTOR	1/16W 680R J	
R439	VE-30012510	RESISTOR	1/16W 100R J	
R440	VE-30012648	RESISTOR	1/16W 150K J	
R441	VE-30012641	RESISTOR	1/16W 10K J	
R442	VE-30012641	RESISTOR	1/16W 10K J	
R443	VE-30000797	RESISTOR	1/10W 75R J	
R444	VE-30000797	RESISTOR	1/10W 75R J	
R445	VE-30012657	RESISTOR	1/16W 1K J	
R446	VE-30012674	RESISTOR	1/16W 27K J	
R447	VE-30012657	RESISTOR	1/16W 1K J	
R448	VE-30012692	RESISTOR	1/16W 4.7K J	
R449	VE-30012641	RESISTOR	1/16W 10K J	
R450	VE-30012692	RESISTOR	1/16W 4.7K J	
R451	VE-30012641	RESISTOR	1/16W 10K J	
R452	VE-30012692	RESISTOR	1/16W 4.7K J	
R453	VE-30012641	RESISTOR	1/16W 10K J	
R454	VE-30012982	RESISTOR	1/16W 10R J	
R455	VE-30012510	RESISTOR	1/16W 100R J	
R459	VE-30012713	RESISTOR	1/16W 75R J	
R460	VE-30012713	RESISTOR	1/16W 75R J	
R461	VE-30012713	RESISTOR	1/16W 75R J	
R462	VE-30012705	RESISTOR	1/16W 6.8K J	
R463	VE-30012713	RESISTOR	1/16W 75R J	
R464	VE-30012713	RESISTOR	1/16W 75R J	
R465	VE-30012644	RESISTOR	1/16W 12K J	
R466	VE-30012644	RESISTOR	1/16W 12K J	
R467	VE-30012713	RESISTOR	1/16W 75R J	
R468	VE-30012705	RESISTOR	1/16W 6.8K J	
R469	VE-30012705	RESISTOR	1/16W 6.8K J	
R470	VE-30012685	RESISTOR	1/16W 33K J	
R471	VE-30012685	RESISTOR	1/16W 33K J	
R472	VE-30012713	RESISTOR	1/16W 75R J	
R473	VE-30012648	RESISTOR	1/16W 150K J	
R474	VE-30012689	RESISTOR	1/16W 39K J	
R475	VE-30012641	RESISTOR	1/16W 10K J	
R476	VE-30012641	RESISTOR	1/16W 10K J	
R477	VE-30012713	RESISTOR	1/16W 75R J	
R478	VE-30012689	RESISTOR	1/16W 39K J	
R479	VE-30012692	RESISTOR	1/16W 4.7K J	
R480	VE-30012696	RESISTOR	1/16W 47K J	
R481	VE-30012648	RESISTOR	1/16W 150K J	
R485	VE-30012641	RESISTOR	1/16W 10K J	
R487	VE-30000464	RESISTOR	1/10W 100R J	
R488	VE-30000464	RESISTOR	1/10W 100R J	
R489	VE-30000464	RESISTOR	1/10W 100R J	
R495	VE-30012668	RESISTOR	1/16W 220R J	
R496	VE-30012669	RESISTOR	1/16W 22K J	
R501	VE-30012510	RESISTOR	1/16W 100R J	
R502	VE-30012510	RESISTOR	1/16W 100R J	
R507	VE-30012648	RESISTOR	1/16W 150K J	
R508	VE-30012641	RESISTOR	1/16W 10K J	
R509	VE-30012509	RESISTOR	1/16W 100K J	
R510	VE-30012705	RESISTOR	1/16W 6.8K J	
R511	VE-30012641	RESISTOR	1/16W 10K J	
R512	VE-30012669	RESISTOR	1/16W 22K J	
R513	VE-30012641	RESISTOR	1/16W 10K J	
R514	VE-30012692	RESISTOR	1/16W 4.7K J	
R550	VE-30012685	RESISTOR	1/16W 33K J	
R551	VE-30012685	RESISTOR	1/16W 33K J	
R700	VE-30014022	RESISTOR	1/16W 47R J	
L100	VE-30001971	FERRITE		
L101	VE-30001971	FERRITE		
L102	VE-30001971	FERRITE		
L103	VE-30001971	FERRITE		
L104	VE-30001971	FERRITE		
L177	VE-30006712	FERRITE BEAD		
L179	VE-30001971	FERRITE		
L180	VE-30001971	FERRITE		
L181	VE-30020531	FERRITE		
L182	VE-30001971	FERRITE		
L183	VE-30020531	FERRITE		
L201	VE-30001971	FERRITE		
L203	VE-30001971	FERRITE		
L204	VE-30002002	FIXED COIL	47uH K	
L206	VE-30001971	FERRITE		
L207	VE-30002002	FIXED COIL	47uH K	
L208	VE-30001971	FERRITE		
L209	VE-30001971	FERRITE		
L210	VE-30001971	FERRITE		
L211	VE-30001971	FERRITE		
L212	VE-30001971	FERRITE		
L213	VE-30001971	FERRITE		
L214	VE-30001971	FERRITE		
L215	VE-30001971	FERRITE		
L216	VE-30001971	FERRITE		
L217	VE-30001971	FERRITE		
L218	VE-30001971	FERRITE		
L219	VE-30001971	FERRITE		
L220	VE-30001971	FERRITE		
L221	VE-30029701	FIXED COIL		
L411	VE-30001971	FERRITE		
L412	VE-30001971	FERRITE		
L413	VE-30001971	FERRITE		
L414	VE-30001971	FERRITE		
L415	VE-30001971	FERRITE		
L422	VE-30016162	FERRITE		
L423	VE-30016162	FERRITE		
L424	VE-30001971	FERRITE		
L500	VE-30020531	FERRITE		
L502	VE-30020531	FERRITE		
L503	VE-30020531	FERRITE		
L504	VE-30020531	FERRITE		
L505	VE-30006712	FERRITE BEAD		
L506	VE-30019475	FIXED COIL	47uH	
L507	VE-30020531	FERRITE		
L508	VE-30020531	FERRITE		
L509	VE-30011450	FIXED COIL	22uH	
L512	VE-30020531	FERRITE		
⚠F501	VE-30035282	FUSE	5A/32VDC	
JK406	VE-30032641	JACK	PC AUDIO IN	
JK500	VE-30027932	DC POWER SOCKET	DC IN	
PL400	VE-30033117	D SOCKET	D-SUB	
PL401	VE-30018089	SOCET SCART	EXT-1	
S416	VE-30012657	RESISTOR	1/16W 1K J	
S417	VE-30012657	RESISTOR	1/16W 1K J	
TU200	VE-30029452	TUNER		
X100	VE-30017946	CLYSTAL	14.318MHZ	
X201	VE-30001741	CLYSTAL	24.576MHz	
XX	VE-30000466	RESISTOR	1/4W 1K J	
Z200	VE-30012545	SAW FILTER		
Z201	VE-30001692	SAW FILTER		

AV JACK P.W. BOARD ASS'Y (VE-20236020)

⚠Ref No.	Part No.	Part Name	Description	Local
D100	VE-30038472	Z DIODE		
D101	VE-30038472	Z DIODE		
D102	VE-30038472	Z DIODE		
D103	VE-30038472	Z DIODE		
D104	VE-30038472	Z DIODE		
D105	VE-30038476	Z DIODE		
D106	VE-30038476	Z DIODE		
C100	VE-30012569	CAPACITOR	33pF 50V J	
C101	VE-30012569	CAPACITOR	33pF 50V J	
C102	VE-30012569	CAPACITOR	33pF 50V J	
C103	VE-30012560	CAPACITOR	100pF 50V J	
C104	VE-30012560	CAPACITOR	100pF 50V J	
C105	VE-30012560	CAPACITOR	100pF 50V J	
C106	VE-30012589	CAPACITOR	4.7nF 50V K	
C107	VE-30012589	CAPACITOR	4.7nF 50V K	
R100	VE-30012695	RESISTOR	1/16W 470R J	
R101	VE-30012695	RESISTOR	1/16W 470R J	
R102	VE-30014128	RESISTOR	1/16W 33R J	
R103	VE-30014128	RESISTOR	1/16W 33R J	
R107	VE-30014078	RESISTOR	1/16W 22R J	
R108	VE-30014078	RESISTOR	1/16W 22R J	
L100	VE-30020393	FERRITE		
L101	VE-30020393	FERRITE		
L102	VE-30020393	FERRITE		
L103	VE-30020393	FERRITE		
L104	VE-30020393	FERRITE		
L105	VE-30020393	FERRITE		
L106	VE-30020393	FERRITE		
L107	VE-30020393	FERRITE		
L108	VE-30020393	FERRITE		
L109	VE-30020393	FERRITE		
L110	VE-30020393	FERRITE		
L111	VE-30020393	FERRITE		
L112	VE-30020393	FERRITE		
L113	VE-30020393	FERRITE		
L114	VE-30020393	FERRITE		
JK100	VE-30032640	JACK	S-VIDEO IN	
JK101	VE-30032639	PIN JACK	VIDEO-IN	
JK102	VE-30032638	PIN JACK	AUDIO R	
JK103	VE-30032636	PIN JACK	AUDIO L	
JK104	VE-30031077	JACK	HEADPHONE	

SIDE CONTROL P.W. BOARD ASS'Y (VE-20235650)

⚠Ref No.	Part No.	Part Name	Description	Local
SW1	VE-30032684	TACT SWITCH	VOLUME +	
SW2	VE-30032684	TACT SWITCH	VOLUME -	
SW3	VE-30032684	TACT SWITCH	PROGRAM +	
SW4	VE-30032684	TACT SWITCH	PROGRAM -	
SW5	VE-30032684	TACT SWITCH	MENU	
SW6	VE-30032684	TACT SWITCH	TV/AV/OK	
SW7	VE-30032684	TACT SWITCH	STAND-BY	

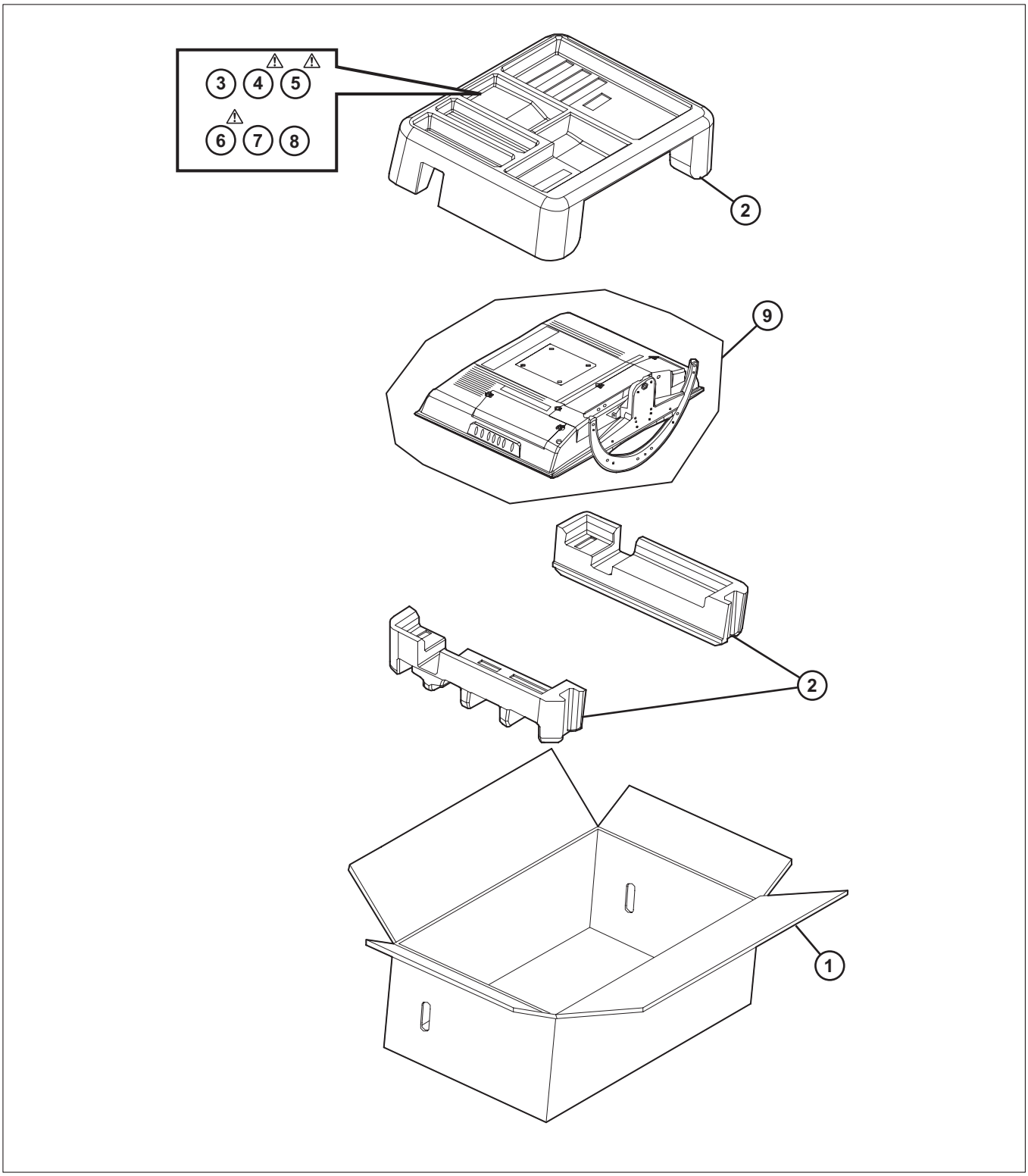
LED P.W. BOARD ASS'Y (VE-20247679)

⚠Ref No.	Part No.	Part Name	Description	Local
IC1	VE-30031033	PREAMPLIFIER		
D1	VE-30040560	LED	RED/GREEN	
C1	VE-30000371	E CAPACITOR	22uF 50V M	
R1	VE-30000459	RESISTOR	1/4W 100R J	

REGULATOR P.W. BOARD ASS'Y (VE-20223829)

⚠Ref No.	Part No.	Part Name	Description	Local
IC100	VE-30027635	IC		
D101	VE-30018574	DIODE		
C101	VE-30007750	E CAPACITOR	470uF 35V	
C102	VE-30012609	CAPACITOR	68nF 50V K	
C104	VE-30016654	CAPACITOR	100nF 16V K	
C106	VE-30007750	E CAPACITOR	470uF 35V	
L102	VE-30032189	FIXED COIL	22uH	
⚠F101	VE-30035282	FUSE	5A/32VDC	

PACKING



PACKING PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
	1	VE-50082828	CARTON BOX		LT-20A55SJ
	1	VE-50083309	CARTON BOX		LT-20A55SU
	2	VE-20217803	CUSHION ASSEMBLY		
	3	VE-30039453	REMOTE CONTROL UNIT	RM-C1861	
⚠	4	VE-50082829	INST BOOK	ENGLISH	LT-20A55SJ
⚠	4	VE-50082875	INST BOOK	ENGLISH/GERMANY/FRENCH/ITALIAN	LT-20A55SU
⚠	4	VE-50082876	INST BOOK	SWEDISH/DANISH/NORWEGIAN/FINNISH	LT-20A55SU
⚠	4	VE-50082877	INST BOOK	POLISH/CZECH/HUNGARIAN	LT-20A55SU
⚠	4	VE-50082878	INST BOOK	SPANISH/PORTUGUESE/DUTCH	LT-20A55SU
⚠	4	VE-50082879	INST BOOK	BULGARIAN/ROMAN	LT-20A55SU
⚠	5	VE-30002375	POWER CORD	For AC ADAPTOR	LT-20A55SJ
⚠	5	VE-30002376	POWER CORD	For AC ADAPTOR	LT-20A55SU
⚠	5	VE-30035135	POWER CORD	For AC ADAPTOR(only SWITZER LAND)	LT-20A55SU
⚠	6	VE-30033122	AC ADAPTOR	DC24V 6A	
	7	----------	BATTERY	AA/R6 TYPE(x2)	
	8	----------	WARRANTY CARD	VE-50082830	LT-20A55SJ
	8	----------	WARRANTY CARD	VE-50082880	LT-20A55SU
	9	VE-50000007	POLY BAG		

JVC

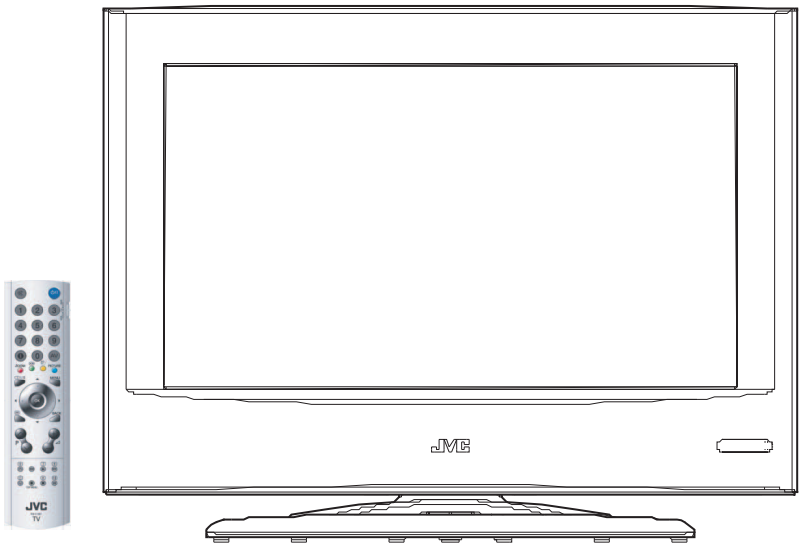
SCHEMATIC DIAGRAMS

WIDE LCD PANEL TELEVISION

LT-20A55SJ,
LT-20A55SU

CD-ROM No.SML200603

InteriArt



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2006/3

LT-20A55SJ, LT-20A55SU
STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety ciritical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal	: Colour bar signal
(2)Setting positions of each knob/button and variable resistor	: Original setting position when shipped
(3)Internal resistance of tester	: DC 20kΩ/V
(4)Oscilloscope sweeping time	: H ⇒ 20μs / div
	: V ⇒ 5ms / div
	: Othters ⇒ Sweeping time is specified
(5)Voltage values	: All DC voltage values

∗ Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

● In the PW board : R209 → R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

No unit	: [Ω]
K	: [kΩ]
M	: [MΩ]

● Rated allowable power

No indication	: 1/16 [W]
Others	: As specified

● Type

No indication	: Carbon resistor
OMR	: Oxide metal film resistor
MFR	: Metal film resistor
MPR	: Metal plate resistor
UNFR	: Uninflammable resistor
FR	: Fusible resistor

∗ Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

1 or higher	: [pF]
less than 1	: [μF]

● Withstand voltage

No indication	: DC50[V]
Others	: DC withstand voltage [V]
AC indicated	: AC withstand voltage [V]

∗ Electrolytic Capacitors

47/50[Example]: Capacitance value [μF]/withstand voltage[V]

● Type

No indication	: Ceramic capacitor
MM	: Metalized mylar capacitor
PP	: Polypropylene capacitor
MPP	: Metalized polypropylene capacitor
MF	: Metalized film capacitor
TF	: Thin film capacitor
BP	: Bipolar electrolytic capacitor
TAN	: Tantalum capacitor

(3)Coils

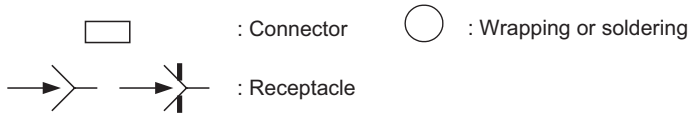
No unit	: [μH]
Others	: As specified

(4)Power Supply

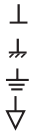
∗ Respective voltage values are indicated

(5)Test point

(6)Connecting method



(7)Ground symbol



5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED(NEUTRAL) : (⏚) side GND. Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. if the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

NOTE

◆ **Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.**
When ordering parts, please use the numbers that appear in the Parts List.

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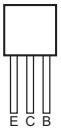
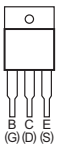
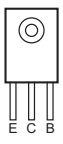
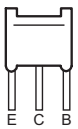
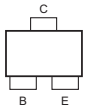
USING P.W. BOARD

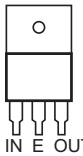
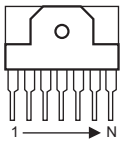
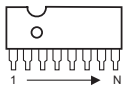
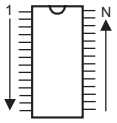
P.W.B ASS'Y name	LT-20A55SJ	LT-20A55SU
MAIN P.W. BOARD	VE-20237199	←
AV JACK P.W. BOARD	VE-20236020	←
SIDE CONTROL P.W. BOARD	VE-20235650	←
LED P.W. BOARD	VE-20247679	←
REGULATOR PW BOARD	VE-20223829	←

SEMICONDUCTOR SHAPES

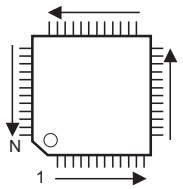
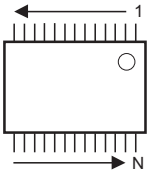
TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

IC

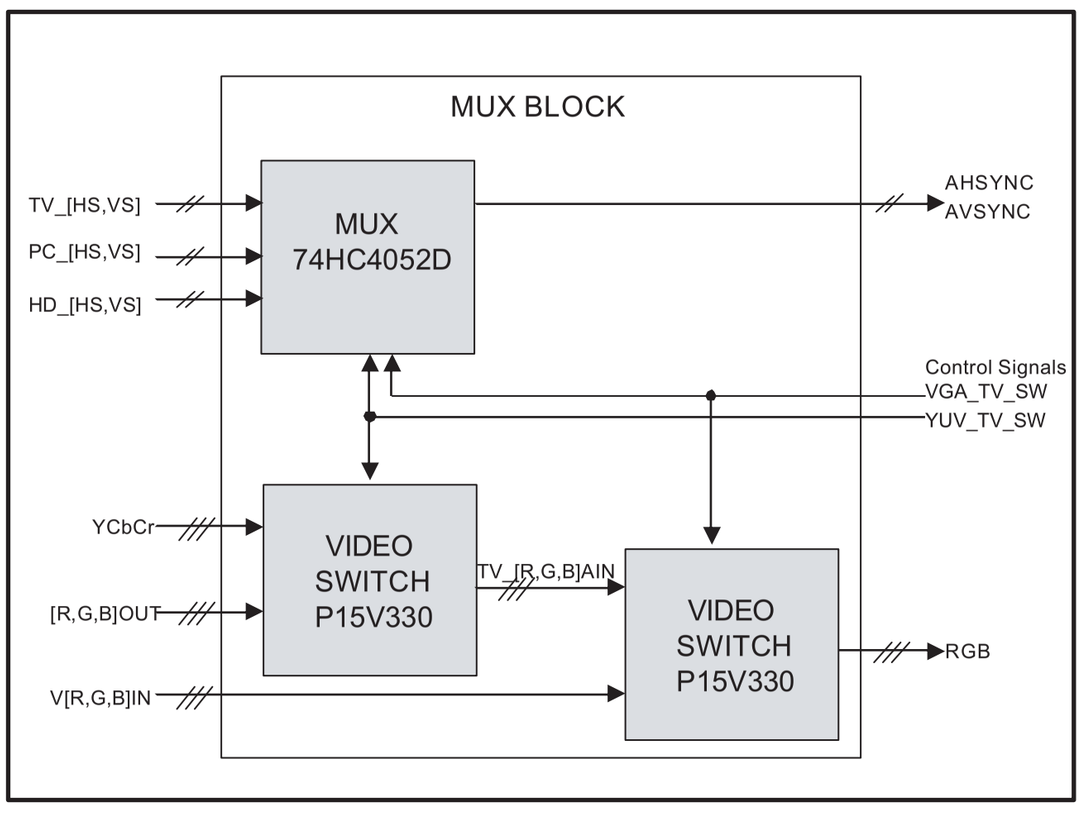
BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

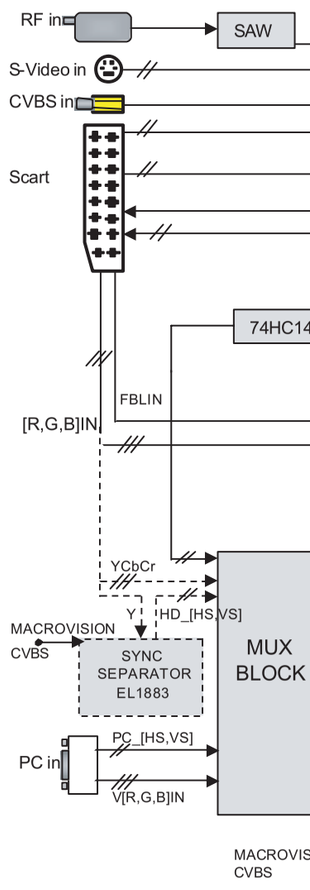
CHIP IC

TOP VIEW		
		

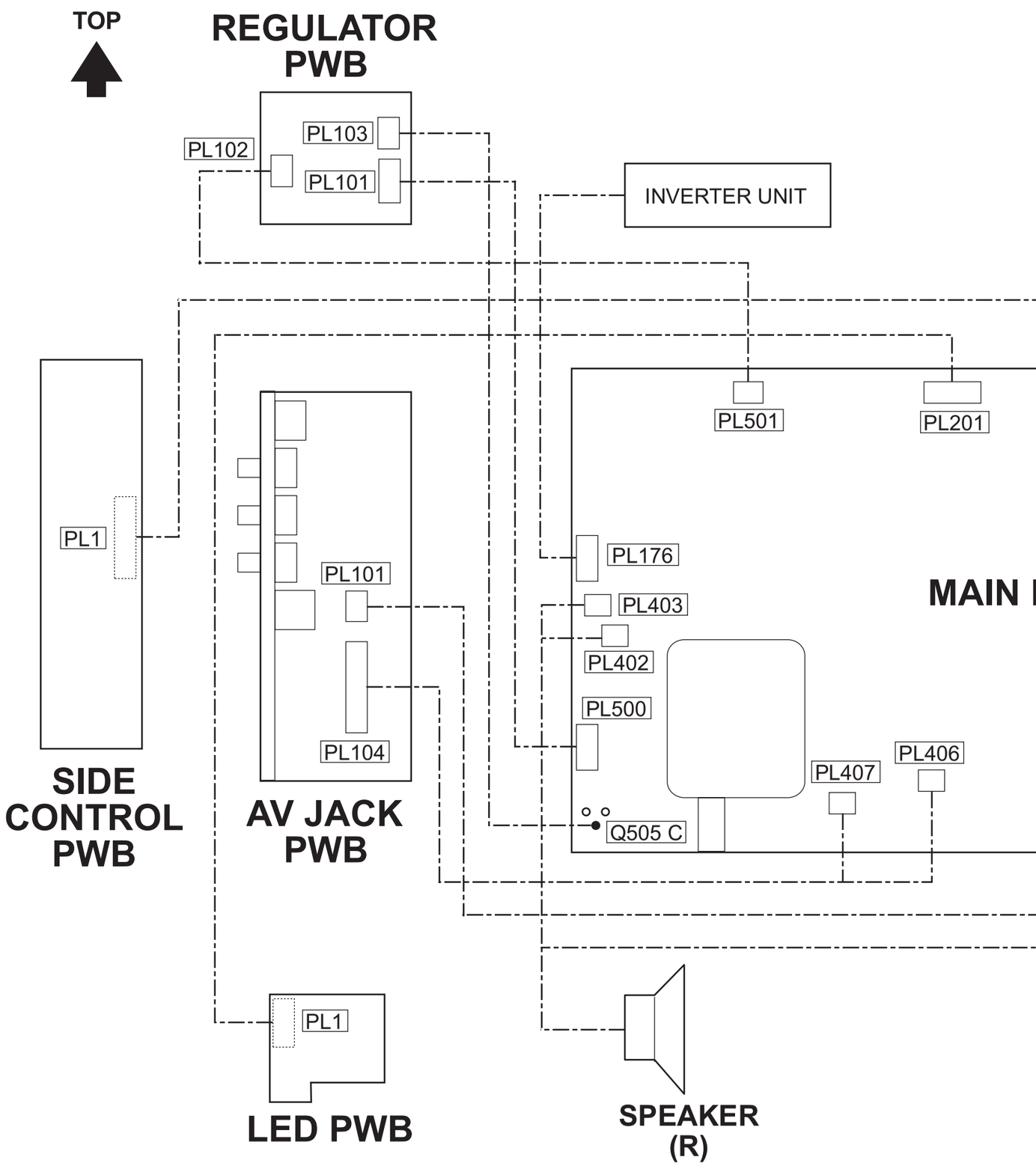
BLOCK DIAGRAM

MUX block diagram



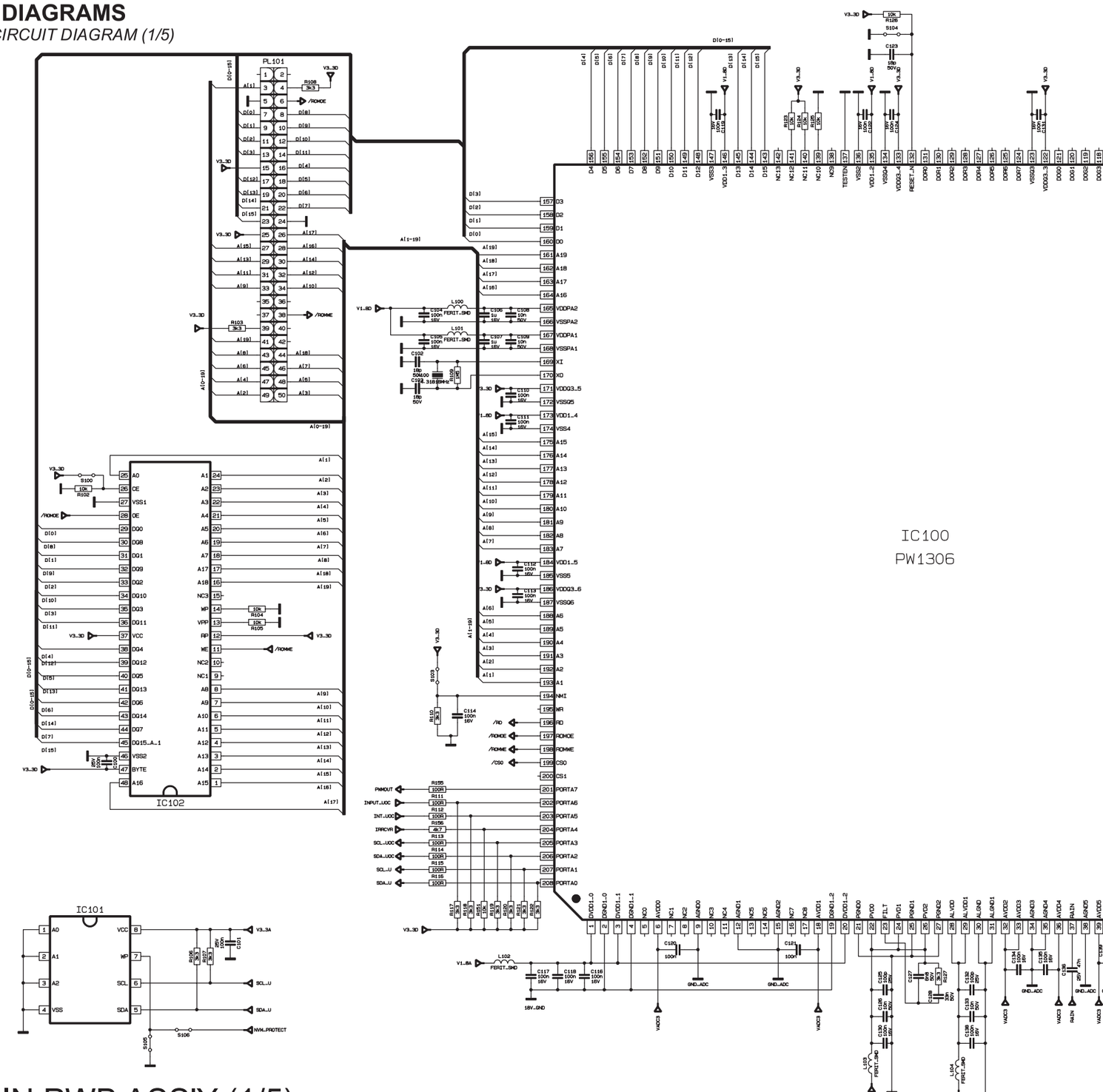


WIRING DIAGRAM



CIRCUIT DIAGRAMS

MAIN PWB CIRCUIT DIAGRAM (1/5)



MAIN PWB ASS'Y (1/5)

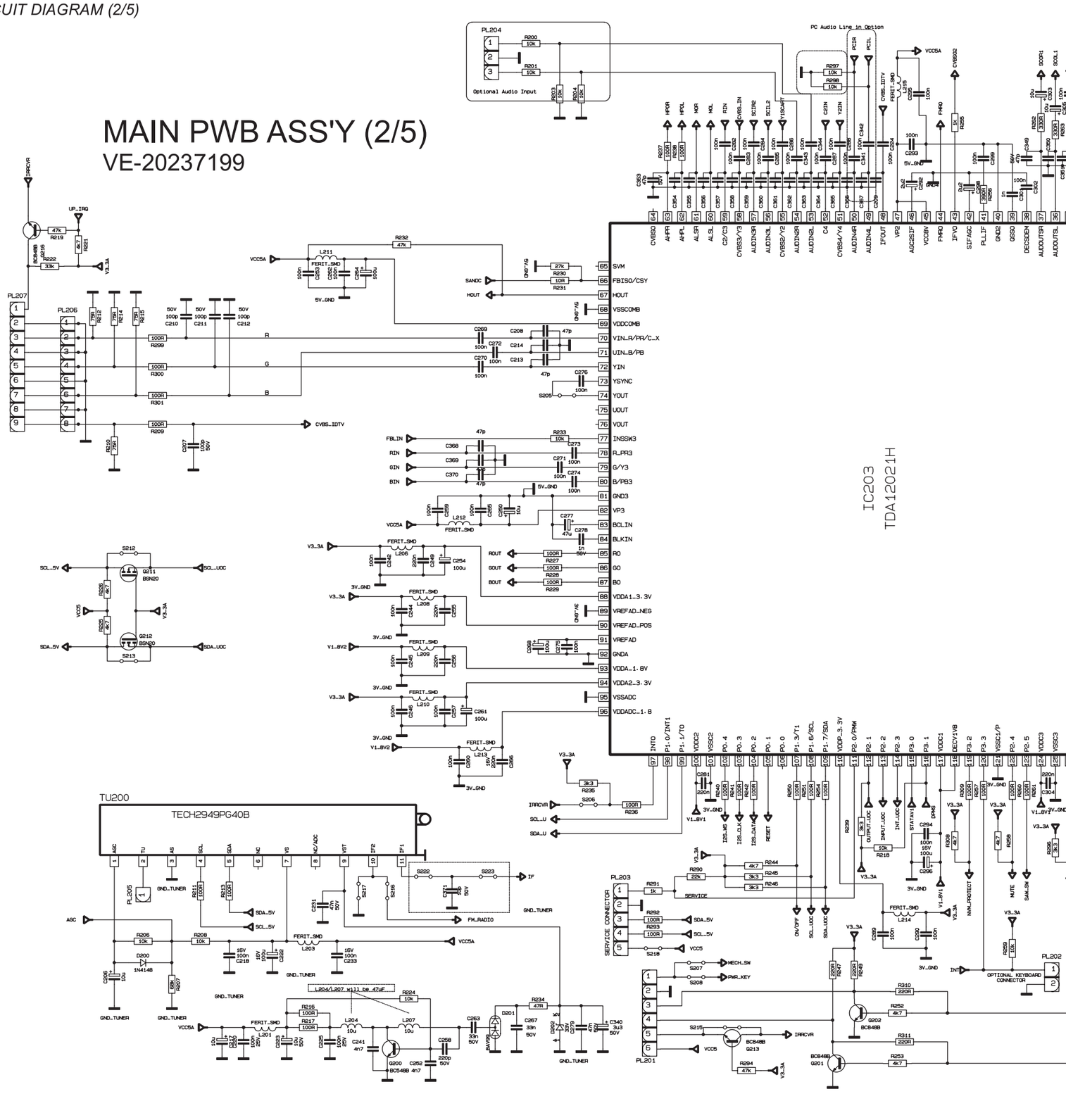
VE-20237199

NOTE : Refer to the part list for the part number of IC101 and IC102.

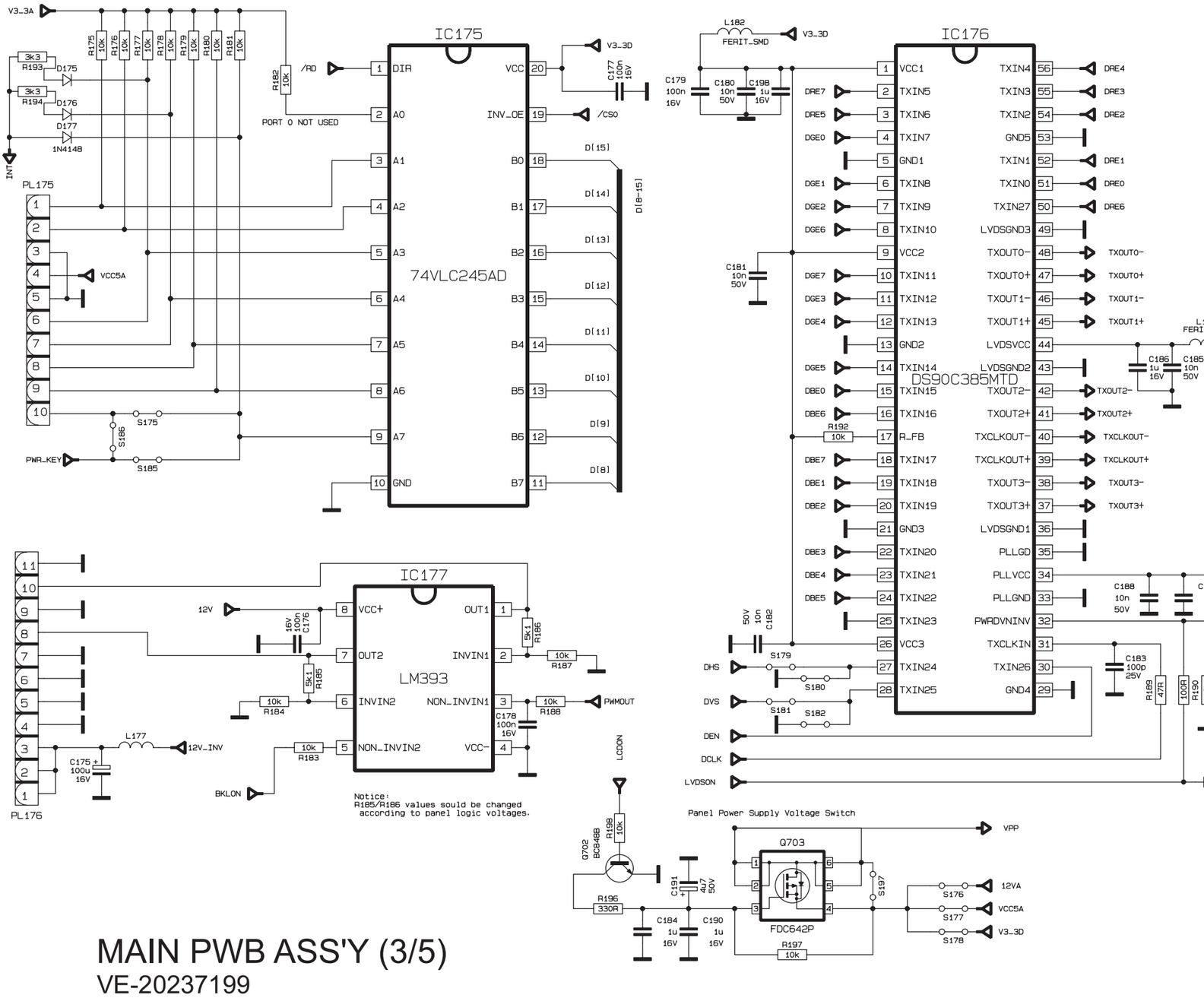
MAIN PWB CIRCUIT DIAGRAM (2/5)

MAIN PWB ASS'Y (2/5)

VE-20237199



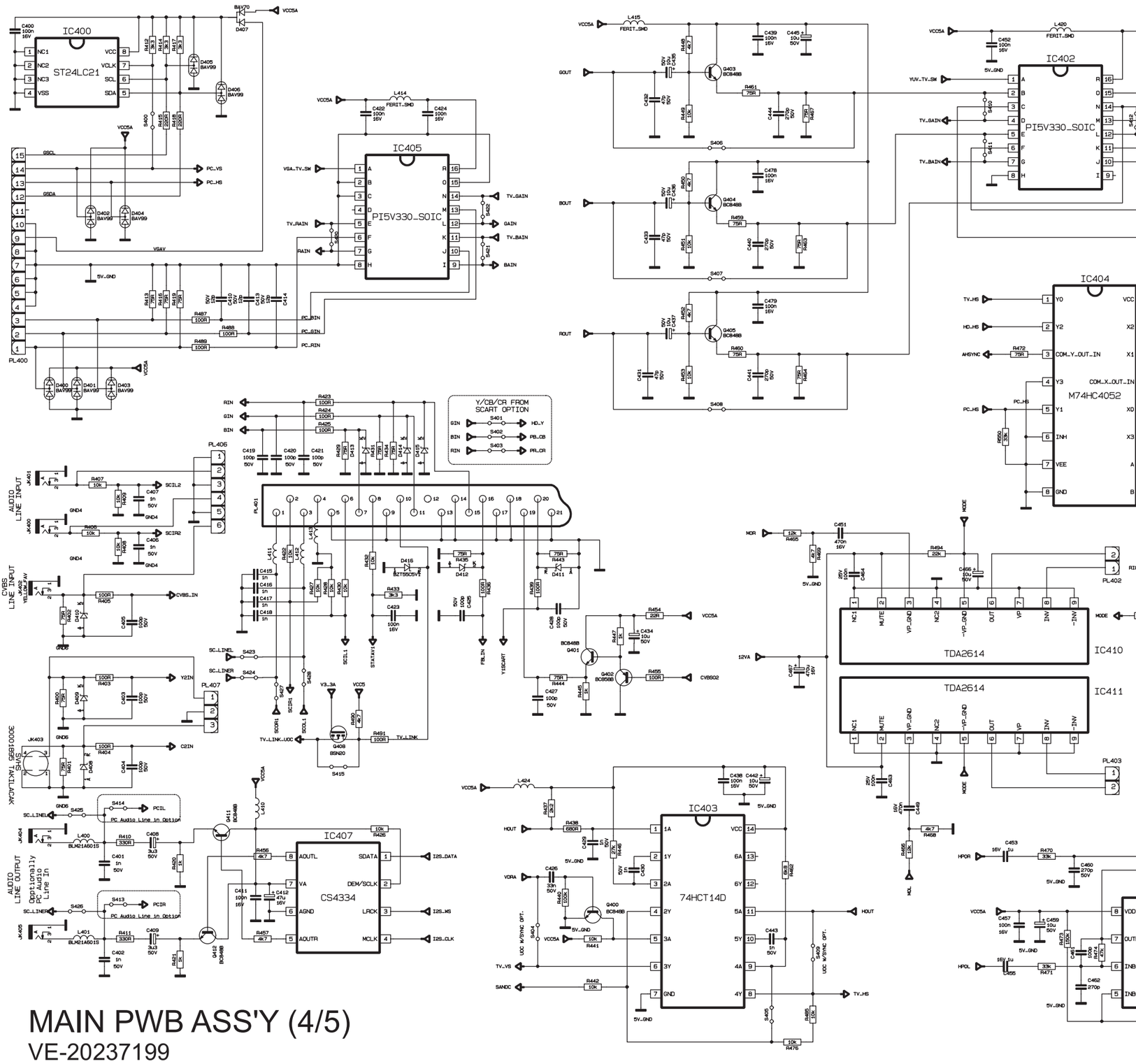
MAIN PWB CIRCUIT DIAGRAM (3/5)



MAIN PWB ASS'Y (3/5)

VE-20237199

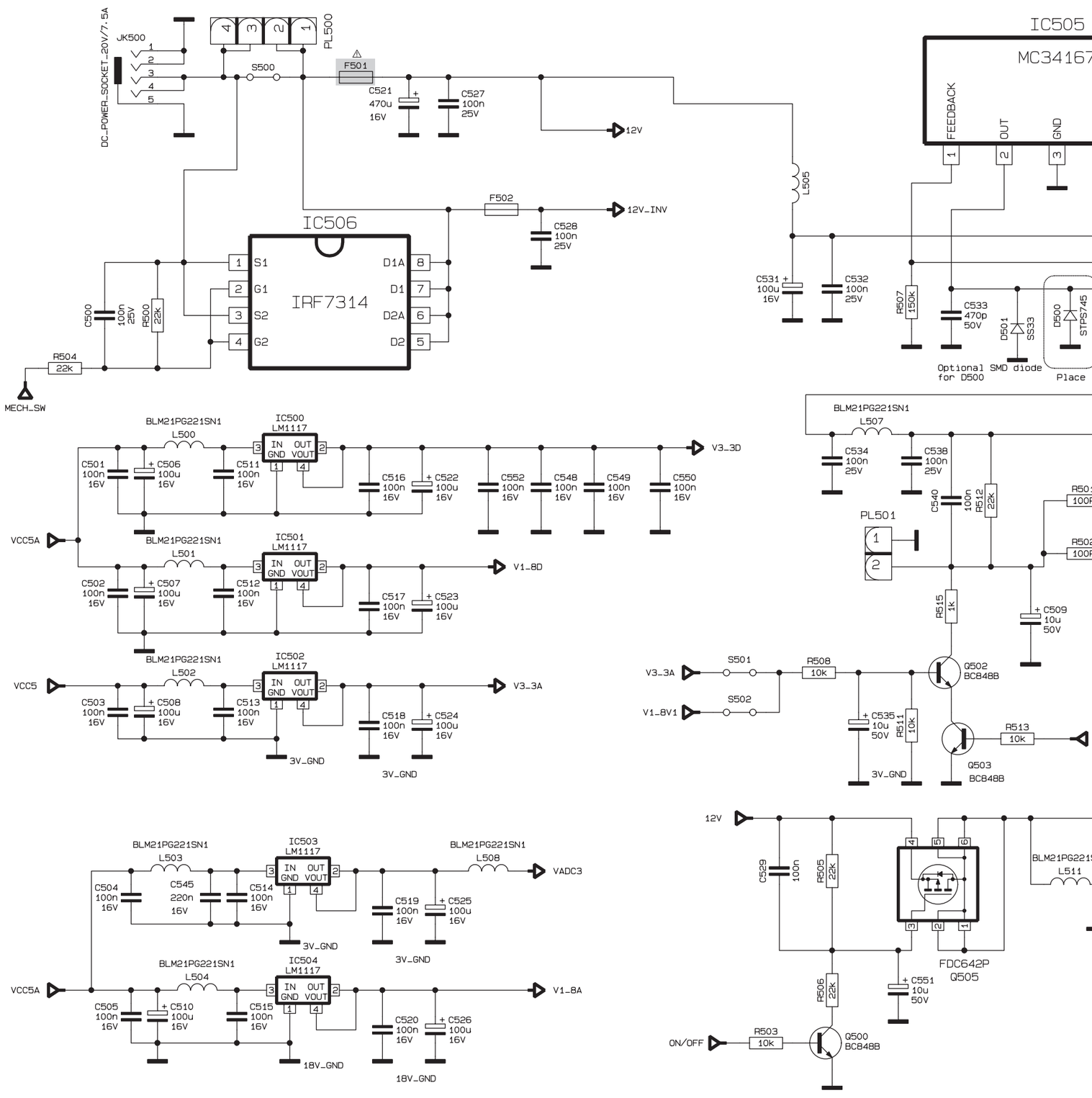
MAIN PWB CIRCUIT DIAGRAM (4/5)



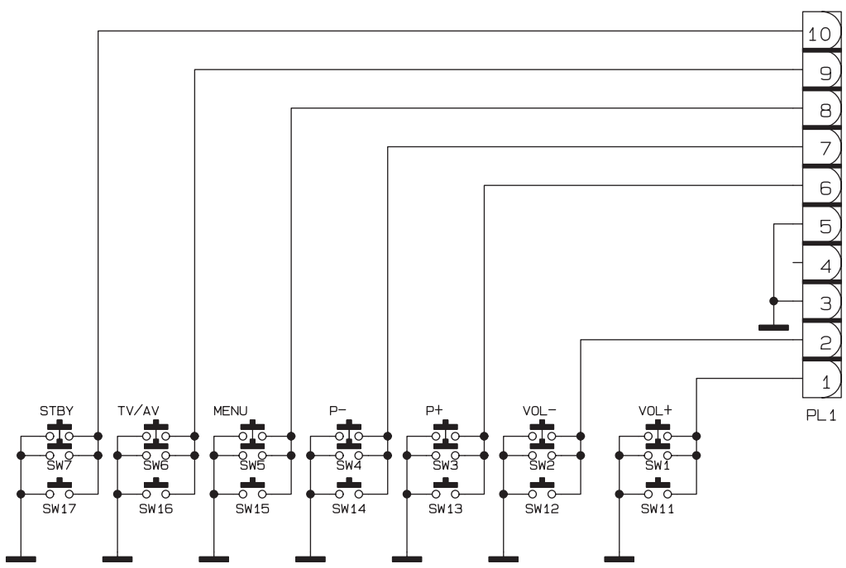
MAIN PWB ASS'Y (4/5)

VE-20237199

MAIN PWB CIRCUIT DIAGRAM (5/5)



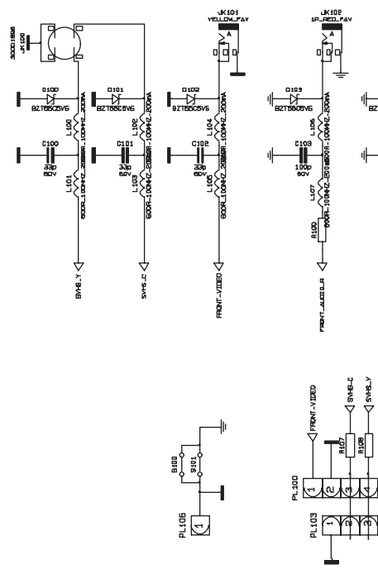
SIDE CONTROL PWB CIRCUIT DIAGRAM



SIDE CONTROL P.W.B ASS'Y
VE-20235650

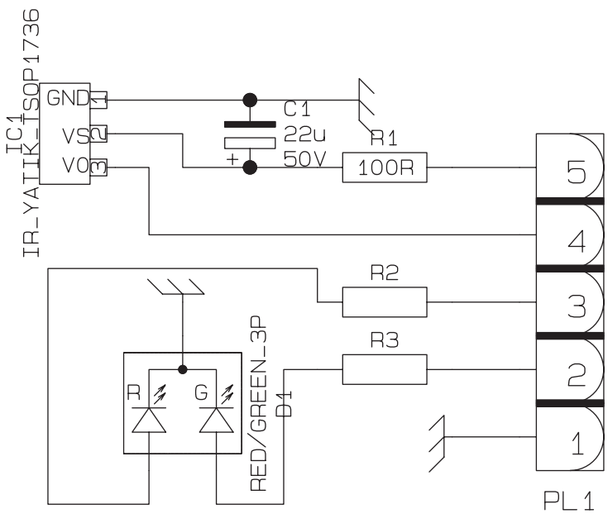
c17TK71_0302_1/1_0.0

AV JACK PWB CIRCUIT DIAGRAM



AV JACK P.W
VE-20236020

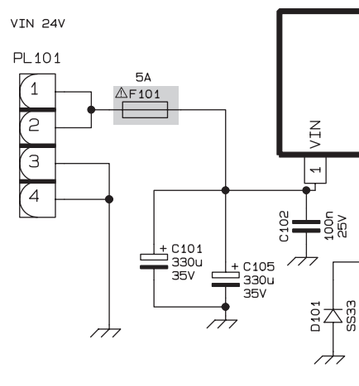
LED PWB CIRCUIT DIAGRAM



LED P.W.B ASS'Y
VE-20247679

c17LD34-4_0302_1/1_0.0

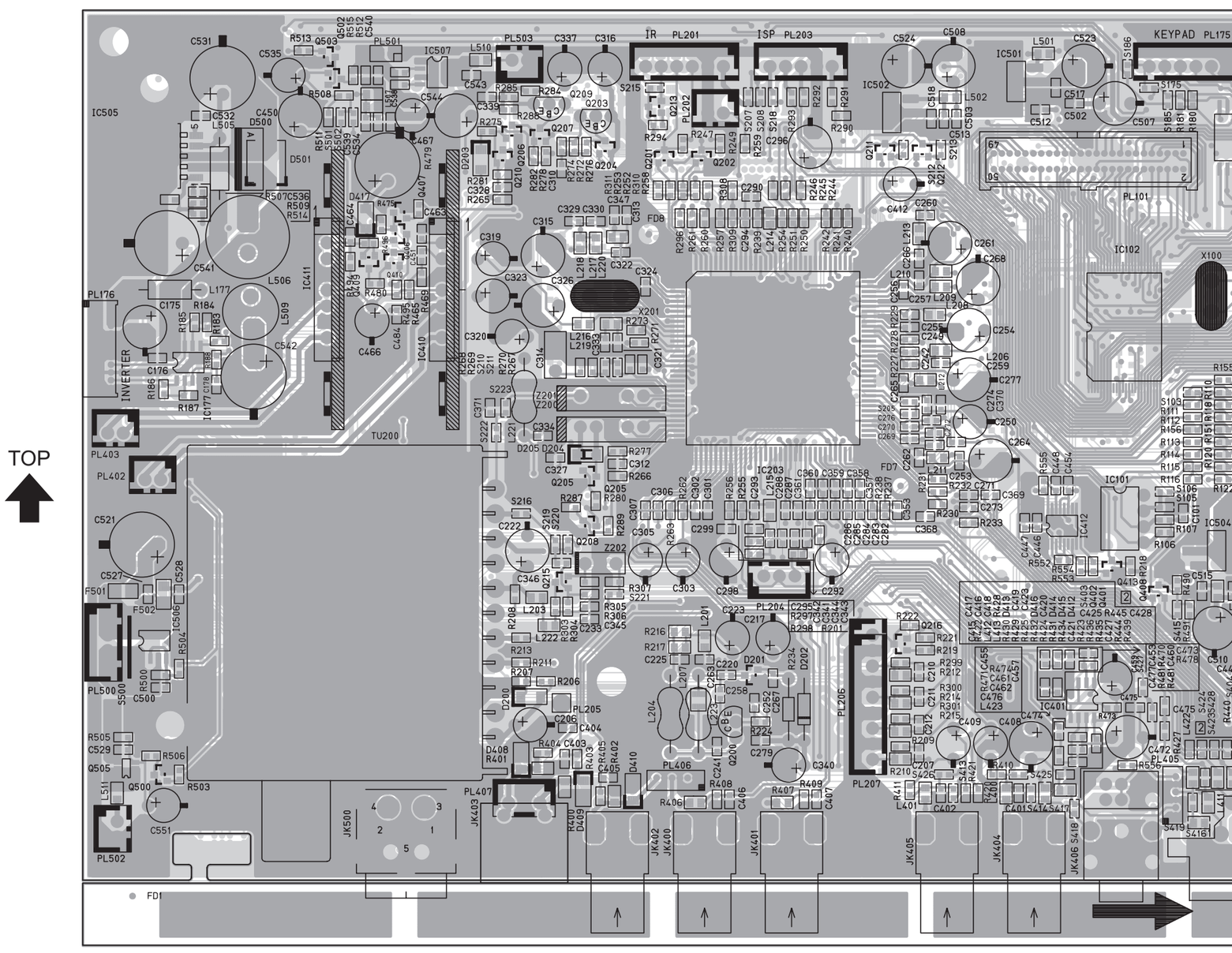
REGULATOR PWB CIRCUIT DIAGRAM



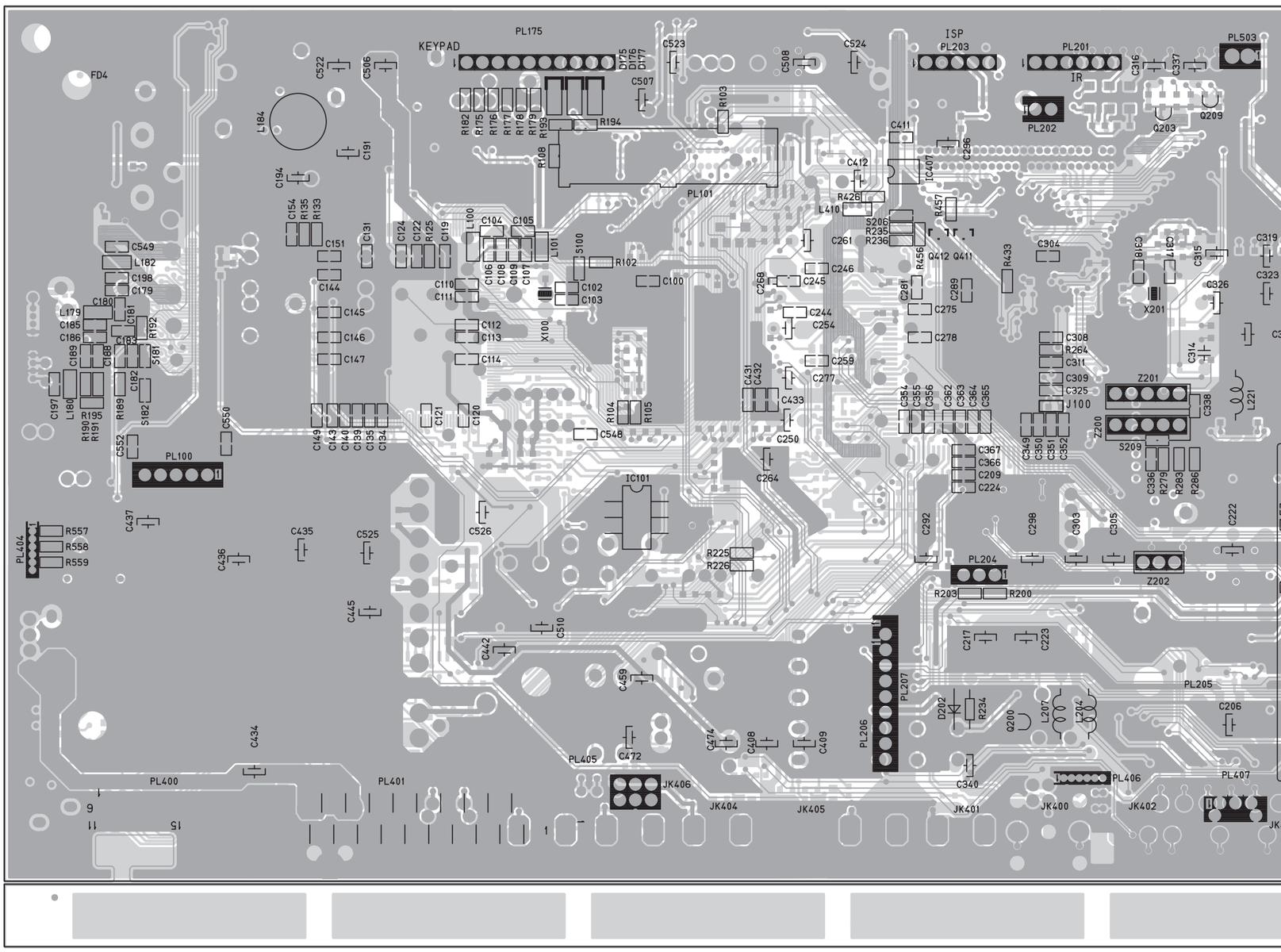
REGULA
VE-202238

PATTERN DIAGRAMS

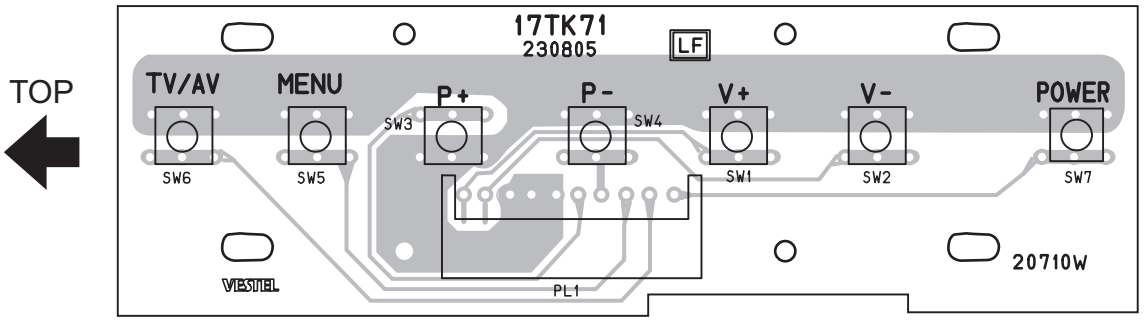
MAIN PWB PATTERN [SOLDER SIDE]



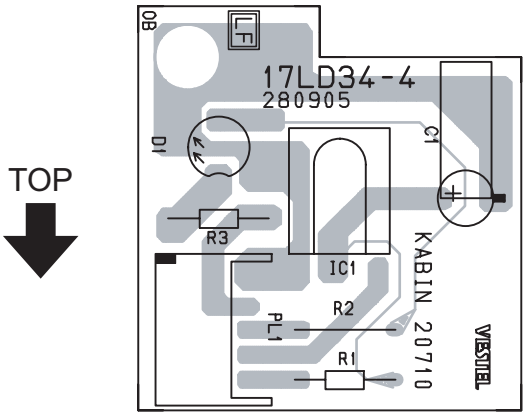
MAIN PWB PATTERN [PARTS SIDE]



SIDE CONTROL PWB PATTERN

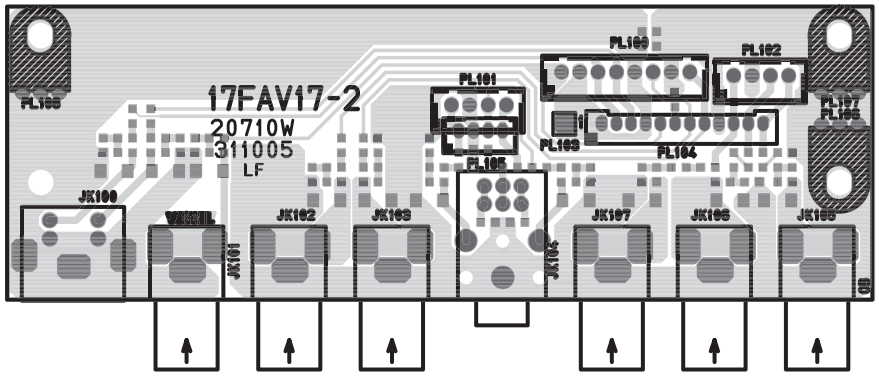


LED PWB PATTERN

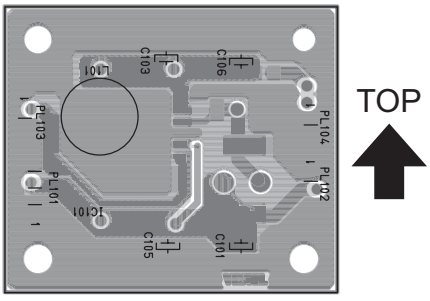


AV JACK PWB PATTERN

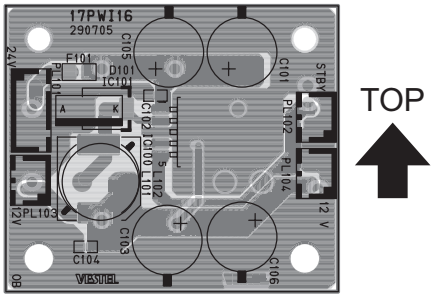
TOP



REGULATOR PWB PATTERN [SOLDER SIDE]



REGULATOR PWB PATTERN [PARTS SIDE]



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